MIPI

MULTIPLE INPUT PRODUCTIVITY INDEXES

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1979-85 Productivity Growth Rates

(Annual Percent of Change)

	Total Factor Productivity	Labor Productivity	Capital Productivity	Capital/Labor Ratio
Private Business economy	0.5	1.1	−0.8	1.9
Segments:				
Farming	5.6	7.0	4.4	2.5
Manufacturing	2.1	3.1	−0.3	3.4
Non-farm, Non-manufacturing	−0.4	0.1	−1.4	1.4
Sectors:				
Goods-producing	1.5	2.2	−0.2	2.5
Services-producing	−0.1	0.4	−0.8	1.3

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WHAT IS MIPI AND WHAT IS IT GOOD FOR?

This publication presents a set of productivity improvement indexes covering various major portions of the U.S. economy for the period 1948-1985. It is an extension of the indexes published in Productivity in the United States, Trends and Cycles, (Johns Hopkins Press, 1980) by Dr. John W. Kendrick and Dr. Elliot S. Grossman.

There are three essentially independent sets of data that are combined in all their possible combinations to give the different types of indexes. These data sets are: a measure of real output, a measure of labor hours, and an estimate of real capital. From these can be developed:

labor productivity, output/labor

capital productivity, output/capital

total factor productivity, output/labor + capital

capital-labor ratio, capital/labor

The portions of the U.S. economy that are measured are:

Private Business Economy
- Goods Producing Industries
  - Farming
  - Manufacturing
  - Mining
  - Construction

Within manufacturing, the twenty major subdivisions (by two digit SIC codes 20-39) are also provided.

- Service Business Industries
  - Transportation (Rail and Non-Rail)
  - Communications
  - Public Utilities
  - Trade
  - Finance and Insurance
  - Real Estate
  - Other Services
- Nonfinancial Corporate Business

Further information on the data sources and assumptions can be found in the Appendix.

The Department of Labor's Bureau of Labor Statistics (BLS) publishes an extensive annual set of labor productivity indexes for various manufacturing and non-manufacturing industries. It also publishes total factor productivity indexes for the private business economy and for manufacturing as a whole. The BLS's treatment of capital is slightly different, but the results are quite similar. What the American Productivity Center's collection adds is an extension of total factor productivity analysis to major service components and manufacturing industries of the economy. As will be seen in this presentation, the measurement of service industries is especially relevant because of the surprisingly poor performance of many of these industries in the recent past, a performance problem that is not widely recognized.

I. Why is total factor productivity important?

Labor productivity is the traditional basis for productivity analysis and is a crucial tool in most organizations for efficiency measurement and performance. Improvements in labor productivity can be approached in different ways. Where there is an increase in output with no increase in labor input due to more labor diligence or better work patterns, the gross gain is the same as the net gain. There are no offsetting costs to the increase in labor productivity. But in a "labor-saving" automation project, for example, the gross gain in labor productivity is at least partially offset by the extra cost of the new capital equipment. Total factor productivity allows a net evaluation of improvement. When all costs are considered, was there a net improvement? In other words, a solitary labor productivity improvement measure does not reflect the possibility that there is a critical cost offset in the capital area.

Just as it is dangerous to label an increase in labor productivity as being unquestionably "good," so is it dangerous to label a decrease in capital productivity as unquestionably "bad." Companies and industries invest for the future, and the additional capital cost sometimes hits the books months or years before any extra output is realized. Persistent capital productivity decline in an industry, however, at least merits more detailed inspection as to whether there might be wasteful surplus capacity and/or inventories as well as implicit inefficiencies.

II. How can a single organization use industry productivity data?

The main value of industry data for most organizations is in benchmark setting for planning purposes. Productivity improvement strategies need to set improvement goals, and national data and industry detail give guidance on attainable, realistic targets. It is important to remember that productivity data are customarily presented in "real" dollar or physical terms. There is no need to "throw in a little" to cover inflation. This collection shows that an improvement of 3 or 4 percent per year is very good productivity performance in most industries. Financial managers accustomed to setting double-digit improvement goals in an inflationary environment need to reevaluate their assumptions when dealing with productivity change.

PRODUCTIVITY IMPROVEMENT 1979-1985

In general the 1979-1985 period was not a distinguished one in U.S. productivity history, but for most industries, at least it was an improvement over 1973-1979. Performance for the private business economy (in average annual change) was:

	1973-1979	1979-1985
Labor Productivity	0.6	1.1
Capital Productivity	(0.5)	(0.8)
Total Factor Productivity	0.3	0.5

Of particular interest to analysts is the widening performance shortfall of service industries compared to goods producing industries. Productivity is thought of as "belonging to" manufacturing; but the U.S. productivity weakness clearly is not directly attributable to better-than-average manufacturing sector gains. Major poor performers from 1979 to 1985 were services such as finance and insurance, non-rail transportation, and real estate (joined by construction, part of the goods category).

Best performers among service industries were public utilities and railroads, with communications not far behind. Communications is the long-term (1948-1985) champion among all industries, goods and services. Although its improvement rate has slipped severely since the AT&T breakup in 1983, performance over the whole period is still good.

Leaders and laggards are summarized below:

	1979-1985 Average Annual Change	
	Labor Productivity	Total Factor Productivity
Leaders		
Farming	7.0	5.6
Communications	3.9	1.3
Railroad	3.5	1.4
Manufacturing	3.1	2.1
Utilities	1.8	1.7
Laggards		
Finance and Insurance	(1.3)	(2.0)
Real Estate	(1.4)	(3.2)
Non-Rail Transportation	(1.8)	(2.0)
Construction	(2.2)	(2.0)

Farming produced the miracle of much more output with less input. Communications had a good increase in output with nearly constant labor input.

although a high increase in capital occurred. Railroads downsized successfully: less output with considerably less labor input. Utilities grew in all measures, fortunately output faster than inputs. Each industry's story is different!

The laggards also had different stories. Finance and insurance had a good increase in output but a large increase in employment and a huge increase in capital. Non-rail transportation and construction also had modest declines in output and modest increases in labor input; but two reinforcing "modests" became large.

Within manufacturing, there are some truly startling success stories.

	1979-1985 Average Annual Change	
	Labor Productivity	Total Factor Productivity
Leaders		
Non-Electrical Machinery	10.6	9.1
Rubber	4.2	4.0
Food	3.7	2.9
Textile	3.5	2.6
Chemical	3.2	2.0
Laggards		
Petroleum	0.8	(4.0)
Instruments	0.4	(0.5)
Leather	0.4	(0.6)
Printing & Publishing	(0.7)	(0.9)
Tobacco	(4.7)	(8.0)

Non-electric machinery shows a phenomenal improvement in productivity, driven by a 25 percent per year growth in output in the 1983-1985 period with little increase in inputs. The nominal dollar increase in output was only 12 percent, but prices in the industry fell at nearly 10 percent per year. Rubber provided a smaller version of the same story; an average of 10 percent growth in 1983-1985 with negligible input increase. Food and chemical had average increases in output with slight declines in labor input. Textile is a downsizing story; a minor decline in output, with simultaneous large declines in input.

On the laggard side, petroleum represents a capital overcapacity situation. Leather and tobacco are unsuccessfully downsizing. Printing shows normal input increases against slower output growth.

Table I
Multiple Input Productivity
By Major Segment of the Economy
(Selected Periods, 1948 - 1985)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
1. Total Factor Productivity					
Business Economy	1.7	2.7	1.5	0.3	0.5
Goods Producing Industries	2.1	3.4	1.3	0.1	1.5
Service Producing Industries	1.4	2.1	1.9	0.5	-0.1
Farming	3.4	3.4	2.8	1.8	5.6
Manufacturing Industry	2.0	2.5	1.8	0.6	2.1
Nonfarm Nonmanufacturing Industry	1.1	2.1	0.9	-0.2	-0.4
Nonfinancial Corporate Business	1.5	2.3	1.2	0.2	0.6
2. Labor Productivity (Output per hour worked)					
Business Economy	2.2	3.2	2.1	0.6	1.1
Goods Producing Industries	2.6	4.0	1.7	0.5	2.2
Service Producing Industries	1.9	2.5	2.6	0.7	0.4
Farming	4.8	4.7	4.6	3.1	7.0
Manufacturing Industry	2.6	3.0	2.5	1.4	3.1
Nonfarm Nonmanufacturing Industry	1.5	2.5	1.5	0.0	0.1
Nonfinancial Corporate Business	1.8	2.6	1.5	0.4	1.1
3. Capital Productivity (Output per unit of capital input)					
Business Economy	0.3	1.2	0.0	-0.5	-0.8
Goods Producing Industries	0.3	1.3	-0.2	-1.3	-0.2
Service Producing Industries	0.5	1.1	0.6	0.2	-0.8
Farming	0.4	-0.7	-0.2	0.5	4.4
Manufacturing Industry	-0.2	0.6	-0.6	-1.8	-0.3
Nonfarm Nonmanufacturing Industry	0.1	1.0	-0.3	-0.5	-1.4
Nonfinancial Corporate Business	0.6	1.4	0.4	-0.3	-0.7

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Table II

Outputs, Inputs and Capital-Labor Ratio
By Major Segment of the Economy
(Selected Periods, 1948 - 1985)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
1. Output (Real product, in 1982 dollars)					
Business Economy	3.2	3.6	3.6	2.5	2.2
Goods Producing Industries	2.6	3.6	2.3	1.3	1.3
Service Producing Industries	3.7	3.6	4.8	3.4	2.8
Farming	1.2	0.2	0.7	1.5	4.0
Manufacturing Industry	3.2	4.0	3.8	1.9	1.8
Nonfarm Nonmanufacturing Industry	3.3	3.7	3.7	2.8	2.2
Nonfinancial Corporate Business	3.7	4.2	4.4	2.7	2.3
2. Labor Input (Hours worked)					
Business Economy	1.0	0.4	1.4	1.9	1.1
Goods Producing Industries	-0.1	-0.4	0.6	0.8	-0.9
Service Producing Industries	1.8	1.1	2.2	2.7	2.3
Farming	-3.5	-4.2	-3.7	-1.5	-2.8
Manufacturing Industry	0.6	1.0	1.2	0.5	-1.2
Nonfarm Nonmanufacturing Industry	1.8	1.1	2.1	2.7	2.2
Nonfinancial Corporate Business	1.9	1.5	2.9	2.3	1.1

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Table II (Cont'd)

Outputs, Inputs and Capital-Labor Ratio
By Major Segment of the Economy
(Selected Periods, 1948 - 1985)

	Average Anual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
3. Capital Input					
Business Economy	2.9	2.4	3.6	3.1	3.0
Goods Producing Industries	2.3	2.3	2.5	2.7	1.5
Service Producing Industries	3.2	2.5	4.2	3.3	3.7
Farming	0.7	1.0	0.9	1.0	-0.4
Manufacturing Industry	3.4	3.3	4.4	3.8	2.1
Nonfarm Nonmanufacturing Industry	3.2	2.7	4.0	3.3	3.7
Nonfinancial Corporate Business	3.1	2.7	4.0	3.0	3.0
4. Capital - Labor Ratio					
Business Economy	1.9	2.0	2.1	1.2	1.9
Goods Producing Industries	2.4	2.7	1.9	1.9	2.5
Service Producing Industries	1.3	1.3	2.0	0.6	1.3
Farming	4.4	5.4	4.8	2.6	2.5
Manufacturing Industry	2.8	2.3	3.2	3.2	3.4
Nonfarm Nonmanufacturing Industry	1.4	1.6	1.8	0.5	1.4
Nonfinancial Corporate Business	1.2	1.2	1.1	0.7	1.8

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Table III a.
Total Factor Productivity
By Major Industries of the Economy
(Selected Periods, 1948 - 85)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
Business Economy	1.7	2.7	1.5	0.3	0.5
Goods Producing Industries	2.1	3.4	1.3	0.1	1.5
Service Producing Industries	1.4	2.1	1.9	0.5	-0.1
Farming	3.4	3.4	2.8	1.8	5.6
Manufacturing	2.0	2.5	1.8	0.6	2.1
Food	2.6	2.9	3.6	0.1	2.9
Tobacco	0.2	2.7	2.0	-0.2	-8.0
Textiles	3.9	4.6	2.0	5.7	2.6
Apparel	2.1	1.9	2.7	2.8	1.5
Lumber	2.4	3.8	1.0	1.5	1.3
Furniture	1.7	2.0	1.6	2.1	0.5
Paper	2.0	2.0	3.7	0.1	1.8
Printing & Publishing	1.0	2.1	0.8	-0.2	-0.9
Chemicals	3.2	4.1	4.0	1.1	2.0
Petroleum	0.6	2.9	0.8	-1.4	-4.0
Rubber	1.9	2.2	1.7	-0.8	4.0
Leather	0.8	1.1	1.8	0.2	-0.6
Stone,Clay & Glass	1.4	2.2	1.0	0.5	0.9
Primary Metals	0.0	1.0	0.7	-2.8	-0.9
Fabricated Metals	1.3	1.8	1.3	0.0	1.1
Machinery, exc. Elec.	2.5	1.4	1.5	0.4	9.1
Electrical Machinery	3.4	4.2	2.7	3.5	1.9
Transportation Equipment	2.0	3.5	1.2	0.1	0.6
Instruments	2.5	3.6	2.4	2.7	-0.5
Miscellaneous Manufactures	2.0	2.6	2.9	0.1	1.2
Nonfarm Nonmanufacturing	1.1	2.1	0.9	-0.2	-0.4
Mining	0.6	3.1	2.0	-6.0	-1.5
Construction	-0.2	2.9	-3.9	-2.2	-2.0
Transportation	1.6	2.1	2.7	1.5	-1.3
Railroad	2.7	4.1	1.8	1.3	1.4
Nonrail	0.7	0.5	2.7	1.3	-2.0
Communications	3.9	5.6	3.4	2.4	1.3
Public Utilities	3.5	5.8	3.0	-0.6	1.7
Trade	1.9	2.6	2.4	0.4	0.8
Finance & Insurance	0.3	1.3	0.6	-0.7	-2.0
Real Estate	0.6	1.8	0.3	1.4	-3.2
Services	0.7	0.4	1.4	0.4	0.8
Nonfinancial Corporate Business	1.5	2.3	1.2	0.2	0.6

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Table III b.
Labor Productivity
(Output per Hour)
By Major Industries of the Economy
(Selected Periods, 1948 - 85)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
Business Economy	2.2	3.2	2.1	0.6	1.1
Goods Producing Industries	2.6	4.0	1.7	0.5	2.2
Service Producing Industries	1.9	2.5	2.6	0.7	0.4
Farming	4.8	4.7	4.6	3.1	7.0
Manufacturing	2.6	3.0	2.5	1.4	3.1
Food	3.1	3.2	4.3	0.8	3.7
Tobacco	2.3	4.0	4.1	2.5	-4.7
Textiles	4.5	5.0	2.4	6.6	3.5
Apparel	2.4	2.0	3.0	3.4	1.7
Lumber	3.0	4.3	1.5	2.6	1.7
Furniture	1.9	2.1	2.0	2.8	0.6
Paper	2.8	2.5	4.4	1.3	2.9
Printing & Publishing	1.3	2.4	1.4	0.0	-0.7
Chemicals	4.2	4.8	5.2	2.5	3.2
Petroleum	3.1	5.5	2.0	0.0	0.8
Rubber	2.3	2.5	2.3	-0.3	4.2
Leather	1.2	1.2	2.3	0.7	0.4
Stone,Clay & Glass	2.0	2.6	1.5	1.3	1.8
Primary Metals	0.8	1.5	1.5	-2.1	1.0
Fabricated Metals	1.7	2.1	1.7	0.6	1.8
Machinery, exc. Elec.	3.1	1.8	2.1	0.9	10.6
Electrical Machinery	4.0	4.5	3.5	4.3	3.2
Transportation Equipment	2.5	3.8	2.2	0.6	1.4
Instruments	3.0	3.8	3.2	2.9	0.4
Miscellaneous Manufactures	2.6	3.0	3.5	0.8	2.0
Nonfarm Nonmanufacturing	1.5	2.5	1.5	0.0	0.1
Mining	1.5	4.9	2.4	-6.9	-0.2
Construction	-0.2	3.0	-3.7	-2.1	-2.2
Transportation	1.6	2.2	2.7	1.5	-1.2
Railroad	3.4	4.8	2.1	1.1	3.5
Nonrail	0.9	0.6	3.2	1.7	-1.8
Communications	5.4	6.6	4.7	4.3	3.9
Public Utilities	4.6	7.2	4.6	0.3	1.8
Trade	2.3	2.9	3.0	0.8	1.3
Finance & Insurance	0.7	1.4	1.3	-0.1	-1.3
Real Estate	1.1	2.3	1.4	-0.2	-1.4
Services	1.0	1.0	1.9	0.2	0.7
Nonfinancial Corporate Business	1.8	2.6	1.5	0.4	1.1

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Table III c.

Capital Productivity
(Output per Unit of Capital)
By Major Industries of the Economy
(Selected Periods, 1948 - 85)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
Business Economy	0.3	1.2	0.0	-0.5	-0.8
Goods Producing Industries	0.3	1.3	-0.2	-1.3	-0.2
Service Producing Industries	0.5	1.1	0.6	0.2	-0.8
Farming	0.4	-0.7	-0.2	0.5	4.4
Manufacturing	-0.2	0.6	-0.6	-1.8	-0.3
Food	0.9	1.7	1.3	-1.9	1.1
Tobacco	-2.0	0.1	0.0	-2.1	-9.7
Textiles	1.9	3.3	0.1	2.4	-0.3
Apparel	-0.3	0.3	-1.2	-1.0	0.1
Lumber	-0.9	-0.7	-1.4	-1.8	0.0
Furniture	0.0	1.3	-1.6	-1.5	-0.1
Paper	0.0	0.3	1.8	-2.9	-0.3
Printing & Publishing	-0.8	0.1	-2.0	-0.9	-1.6
Chemicals	1.5	2.6	2.0	-1.2	0.5
Petroleum	-0.7	1.1	0.2	-2.0	-5.3
Rubber	0.2	0.5	-0.8	-2.8	3.5
Leather	-1.8	0.2	-2.5	-3.1	-5.1
Stone,Clay & Glass	-0.5	0.4	-0.5	-2.0	-1.3
Primary Metals	-2.9	-1.4	-2.1	-5.3	-5.6
Fabricated Metals	-1.4	-0.6	-1.2	-3.1	-2.0
Machinery, exc. Elec.	-0.2	-1.0	-0.9	-1.4	4.5
Electrical Machinery	0.4	2.4	-1.6	0.2	-2.3
Transportation Equipment	0.0	2.0	-2.3	-1.4	-1.3
Instruments	0.7	1.9	-0.5	2.2	-2.6
Miscellaneous Manufactures	-1.0	-0.4	-0.2	-3.1	-1.6
Nonfarm Nonmanufacturing	0.1	1.0	-0.3	-0.5	-1.4
Mining	-2.0	-2.1	1.3	-3.8	-4.4
Construction	-1.6	1.0	-6.5	-3.5	0.0
Transportation	1.4	1.8	2.8	1.6	-1.8
Railroad	0.8	1.6	1.1	1.8	-2.5
Nonrail	-0.4	0.2	0.4	-0.4	-2.9
Communications	0.4	0.4	1.4	0.2	-0.9
Public Utilities	2.1	3.5	1.8	-1.2	1.7
Trade	-0.6	0.5	-1.5	-1.5	-1.5
Finance & Insurance	-1.7	0.7	-2.7	-3.9	-4.7
Real Estate	0.6	1.8	0.2	1.6	-3.3
Services	-0.1	-1.1	0.6	0.7	1.0
Nonfinancial Corporate Business	0.6	1.4	0.4	-0.3	-0.7

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Table III d.

Capital - Labor Ratio
By Major Industries of the Economy
(Selected Periods, 1948 - 85)

	Average Annual Rates of Change				
	1948-85	1948-65	1965-73	1973-79	1979-85
Business Economy	1.9	2.0	2.1	1.2	1.9
Goods Producing Industries	2.4	2.7	1.9	1.9	2.5
Service Producing Industries	1.3	1.3	2.0	0.6	1.3
Farming	4.4	5.4	4.8	2.6	2.5
Manufacturing	2.8	2.3	3.2	3.2	3.4
Food	2.2	1.4	2.9	2.8	2.6
Tobacco	4.4	3.9	4.1	4.7	5.6
Textiles	2.5	1.7	2.3	4.0	3.8
Apparel	2.7	1.6	4.3	4.5	1.6
Lumber	3.9	5.0	2.9	4.4	1.7
Furniture	1.9	0.8	3.6	4.3	0.7
Paper	2.8	2.3	2.5	4.3	3.2
Printing & Publishing	2.1	2.3	3.4	0.9	0.9
Chemicals	2.7	2.2	3.1	3.7	2.7
Petroleum	3.8	4.4	1.8	2.1	6.4
Rubber	2.1	2.0	3.1	2.6	0.6
Leather	3.1	1.1	4.9	3.9	5.7
Stone,Clay & Glass	2.5	2.2	1.9	3.3	3.1
Primary Metals	3.9	3.0	3.6	3.5	7.0
Fabricated Metals	3.2	2.8	3.0	3.8	3.9
Machinery, exc. Elec.	3.3	2.8	3.1	2.4	5.8
Electrical Machinery	3.6	2.0	5.2	4.1	5.6
Transportation Equipment	2.6	1.7	4.6	2.1	2.8
Instruments	2.3	1.9	3.8	0.7	3.1
Miscellaneous Manufactures	3.6	3.3	3.6	4.0	3.7
Nonfarm Nonmanufacturing	1.4	1.6	1.8	0.5	1.4
Mining	3.6	7.1	1.1	-3.3	4.4
Construction	1.4	2.0	3.0	1.5	-2.1
Transportation	0.2	0.4	-0.2	-0.1	0.6
Railroad	2.5	3.1	1.0	-0.6	6.1
Nonrail	1.3	0.4	2.7	2.1	1.1
Communications	5.0	6.2	3.2	4.0	4.8
Public Utilities	2.5	3.6	2.7	1.5	0.1
Trade	2.9	2.4	4.5	2.4	2.8
Finance & Insurance	2.4	0.7	4.2	4.0	3.6
Real Estate	0.5	0.5	1.2	-1.7	2.0
Services	1.1	2.1	1.3	-0.5	-0.3
Nonfinancial Corporate Business	1.2	1.2	1.1	0.7	1.8

October, 1986

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

1. Business Economy

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	38.3	81.2	45.2	69.5	55.1	47.2	84.8	55.6
1949	37.4	78.5	45.8	67.9	55.2	47.7	81.7	58.4
1950	41.0	79.3	47.1	68.8	59.5	51.7	87.0	59.4
1951	43.9	81.6	48.6	70.9	61.9	53.8	90.3	59.5
1952	45.3	81.7	49.6	71.3	63.6	55.4	91.4	60.7
1953	47.4	82.5	50.7	72.1	65.7	57.5	93.5	61.5
1954	46.5	79.7	51.6	70.6	65.9	58.4	90.1	64.8
1955	49.7	82.7	53.0	73.0	68.1	60.1	93.8	64.1
1956	51.1	83.9	54.4	74.3	68.9	60.9	94.1	64.8
1957	51.7	82.7	55.6	73.8	70.0	62.5	93.0	67.3
1958	50.7	78.8	56.5	71.5	71.0	64.4	89.8	71.7
1959	54.4	81.8	57.9	74.0	73.6	66.5	94.0	70.7
1960	55.4	81.9	59.1	74.5	74.4	67.6	93.8	72.1
1961	56.5	80.7	60.4	74.0	76.3	70.0	93.5	74.8
1962	59.4	81.9	61.9	75.4	78.8	72.5	95.9	75.6
1963	62.1	82.4	63.7	76.3	81.5	75.4	97.6	77.3
1964	65.9	83.7	65.6	77.8	84.7	78.7	100.5	78.3
1965	70.0	86.4	67.9	80.3	87.1	81.0	103.1	78.5
1966	73.6	88.5	70.5	82.6	89.2	83.2	104.5	79.7
1967	75.6	88.5	72.9	83.4	90.7	85.5	103.7	82.4
1968	78.9	89.9	75.4	85.2	92.7	87.8	104.6	83.9
1969	81.1	92.3	78.3	87.7	92.4	87.8	103.5	84.8
1970	80.3	90.8	80.8	87.5	91.8	88.4	99.4	88.9
1971	82.5	90.4	83.4	88.1	93.7	91.3	98.9	92.3
1972	87.7	93.2	86.3	91.0	96.4	94.1	101.6	92.6
1973	92.9	96.9	89.8	94.6	98.3	95.9	103.5	92.6
1974	91.3	97.3	93.0	95.8	95.2	93.9	98.2	95.6
1975	89.4	93.4	94.7	93.8	95.2	95.7	94.3	101.4
1976	94.5	96.1	97.1	96.5	98.0	98.3	97.4	101.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	105.8	104.9	103.5	104.4	101.3	100.8	102.2	98.7
1979	107.9	108.3	107.7	108.1	99.8	99.6	100.2	99.4
1980	106.7	107.5	111.3	108.7	98.1	99.3	95.9	103.5
1981	108.9	108.2	115.1	110.4	98.6	100.7	94.6	106.4
1982	105.5	105.2	117.8	109.3	96.5	100.3	89.6	112.0
1983	109.9	106.7	119.9	111.0	99.0	103.0	91.7	112.4
1984	118.8	112.8	124.2	116.6	102.0	105.3	95.7	110.1
1985	122.7	115.3	128.2	119.5	102.7	106.4	95.7	111.1

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

2. Goods Producing Sector

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	45.1	104.5	50.4	89.2	50.6	43.2	89.5	48.3
1949	43.0	98.6	51.2	85.3	50.4	43.6	84.0	51.9
1950	48.3	100.5	52.9	87.2	55.4	48.0	91.2	52.7
1951	53.0	104.2	55.6	90.6	58.5	50.9	95.4	53.4
1952	54.7	103.7	57.1	90.7	60.3	52.8	95.8	55.1
1953	57.8	104.2	58.6	91.6	63.1	55.5	98.6	56.2
1954	55.9	97.6	59.6	87.2	64.2	57.3	93.9	61.1
1955	60.9	101.9	61.3	90.8	67.1	59.7	99.4	60.1
1956	62.5	102.5	63.0	91.7	68.2	61.0	99.2	61.5
1957	62.4	99.1	64.4	89.7	69.5	63.0	96.9	65.0
1958	59.4	91.6	65.1	84.6	70.2	64.9	91.3	71.1
1959	64.6	96.0	66.3	88.1	73.3	67.3	97.4	69.1
1960	65.2	94.7	67.2	87.4	74.6	68.9	97.0	71.0
1961	65.6	91.8	68.2	85.5	76.7	71.5	96.2	74.3
1962	69.5	93.7	69.4	87.3	79.6	74.2	100.1	74.1
1963	73.3	93.8	70.8	87.7	83.6	78.2	103.7	75.5
1964	77.2	94.4	72.3	88.6	87.1	81.7	106.8	76.5
1965	82.3	98.0	74.4	91.8	89.6	83.9	110.6	75.9
1966	86.1	101.1	77.2	94.8	90.8	85.1	111.5	76.3
1967	86.4	99.8	79.6	94.5	91.4	86.5	108.6	79.7
1968	89.1	100.6	81.5	95.6	93.2	88.6	109.4	81.0
1969	90.6	102.3	83.6	97.4	93.0	88.6	108.4	81.7
1970	86.8	97.2	85.2	94.0	92.3	89.3	101.9	87.7
1971	87.1	94.7	86.7	92.6	94.1	92.0	100.5	91.6
1972	92.4	98.4	88.3	95.7	96.5	93.9	104.6	89.8
1973	98.7	102.8	90.8	99.7	99.0	95.9	108.6	88.3
1974	94.5	101.5	93.9	99.5	94.9	93.1	100.6	92.5
1975	88.7	92.7	95.2	93.4	94.9	95.6	93.1	102.7
1976	94.6	95.9	97.5	96.3	98.2	98.6	97.0	101.6
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	105.2	105.2	103.2	104.6	100.6	100.0	102.0	98.1
1979	106.8	107.8	106.6	107.4	99.4	99.1	100.2	98.9
1980	103.0	103.9	109.3	105.2	97.9	99.1	94.2	105.2
1981	104.2	103.3	112.4	105.6	98.7	100.9	92.7	108.8
1982	98.7	95.8	113.6	100.4	98.3	103.0	86.9	118.6
1983	101.3	95.9	114.0	100.6	100.7	105.6	88.9	118.9
1984	111.6	101.9	116.0	105.5	105.7	109.4	96.2	113.8
1985	115.3	102.1	116.9	105.9	108.9	113.0	98.7	114.5

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

3. Service Producing Sector

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	33.3	64.4	42.3	56.3	59.1	51.7	78.6	65.7
1949	33.3	63.9	42.9	56.2	59.3	52.1	77.6	67.1
1950	35.6	64.0	43.9	56.6	62.9	55.6	81.0	68.6
1951	37.1	65.4	44.8	57.8	64.2	56.8	82.8	68.5
1952	38.3	65.9	45.5	58.3	65.7	58.2	84.3	69.0
1953	39.7	66.8	46.4	59.2	67.0	59.4	85.6	69.4
1954	39.6	66.8	47.3	59.5	66.4	59.2	83.7	70.7
1955	41.4	68.8	48.5	61.2	67.7	60.2	85.5	70.5
1956	42.7	70.5	49.7	62.8	68.1	60.6	86.0	70.4
1957	43.8	70.8	50.8	63.3	69.1	61.8	86.2	71.8
1958	44.3	69.6	51.8	62.9	70.5	63.7	85.5	74.4
1959	46.9	71.6	53.3	64.7	72.5	65.5	88.0	74.4
1960	48.2	72.8	54.7	65.9	73.1	66.2	88.1	75.1
1961	49.7	72.7	56.1	66.4	74.9	68.5	88.6	77.2
1962	52.0	73.5	57.9	67.6	77.0	70.7	89.8	78.8
1963	53.8	74.2	59.8	68.8	78.3	72.5	90.0	80.5
1964	57.5	76.0	61.9	70.6	81.4	75.6	92.9	81.4
1965	60.9	78.0	64.3	72.8	83.7	78.1	94.7	82.4
1966	64.4	79.4	66.9	74.6	86.4	81.2	96.4	84.3
1967	67.6	80.3	69.3	76.1	88.9	84.2	97.6	86.3
1968	71.4	82.2	72.1	78.4	91.0	86.8	98.9	87.7
1969	74.0	85.1	75.4	81.4	90.9	87.0	98.2	88.6
1970	75.5	86.2	78.4	83.2	90.7	87.6	96.4	90.9
1971	79.1	87.3	81.6	85.2	92.9	90.6	96.9	93.5
1972	84.2	89.5	85.3	87.9	95.8	94.1	98.8	95.2
1973	88.7	92.7	89.2	91.3	97.1	95.7	99.4	96.3
1974	88.9	94.2	92.4	93.5	95.1	94.4	96.2	98.1
1975	89.9	93.9	94.5	94.1	95.5	95.8	95.2	100.6
1976	94.7	96.3	96.9	96.5	97.9	98.2	97.5	100.6
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.2	104.7	103.7	104.3	101.8	101.4	102.4	99.0
1979	108.7	108.7	108.2	108.5	100.1	100.0	100.4	99.6
1980	109.4	110.0	112.3	110.9	98.6	99.4	97.4	102.1
1981	112.4	111.7	116.6	113.6	99.0	100.7	96.4	104.4
1982	110.5	111.9	120.0	115.0	96.1	98.7	92.0	107.2
1983	116.3	114.5	123.1	117.8	98.7	101.5	94.4	107.5
1984	124.2	120.7	128.7	123.8	100.4	102.9	96.5	106.6
1985	128.2	124.9	134.3	128.5	99.7	102.6	95.4	107.6

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

4. Nonfinancial Corporate Business

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	33.0	58.9	41.4	53.9	61.2	56.0	79.6	70.3
1949	31.4	55.4	42.1	51.6	60.8	56.7	74.7	75.9
1950	35.2	58.0	43.2	53.8	65.3	60.6	81.4	74.5
1951	38.3	61.7	44.5	56.8	67.4	62.0	86.1	72.0
1952	38.8	62.6	45.9	57.8	67.1	62.0	84.6	73.4
1953	41.0	64.3	47.2	59.5	69.0	63.8	87.0	73.3
1954	39.6	60.8	48.1	57.3	69.2	65.2	82.4	79.1
1955	44.0	63.7	49.6	59.8	73.5	69.0	88.6	77.8
1956	44.9	65.2	51.3	61.3	73.3	68.9	87.6	78.7
1957	45.3	64.5	52.7	61.2	74.1	70.3	86.1	81.7
1958	43.0	61.6	53.4	59.4	72.4	69.8	80.6	86.7
1959	47.3	65.3	54.7	62.4	75.8	72.5	86.5	83.7
1960	48.7	66.3	56.1	63.5	76.6	73.4	86.8	84.6
1961	49.7	65.7	57.4	63.5	78.3	75.7	86.7	87.2
1962	53.6	68.3	59.0	65.8	81.5	78.5	91.0	86.3
1963	57.2	69.8	60.7	67.4	84.9	81.9	94.2	86.9
1964	61.0	71.8	62.7	69.4	87.9	84.9	97.3	87.2
1965	65.9	75.9	65.4	73.1	90.2	86.8	100.8	86.1
1966	70.5	80.0	68.8	77.0	91.6	88.1	102.5	85.9
1967	72.2	81.1	71.7	78.7	91.7	88.9	100.6	88.4
1968	76.3	83.8	74.7	81.4	93.8	91.1	102.2	89.1
1969	79.4	87.3	77.8	84.8	93.7	91.0	102.1	89.1
1970	78.6	86.3	81.3	85.0	92.5	91.1	96.6	94.3
1971	80.7	86.2	83.8	85.5	94.3	93.6	96.3	97.3
1972	86.6	90.7	86.5	89.6	96.7	95.6	100.1	95.4
1973	93.1	95.4	89.7	93.9	99.1	97.5	103.7	94.1
1974	90.9	96.1	92.4	95.1	95.6	94.6	98.4	96.2
1975	88.2	91.2	93.9	91.9	96.0	96.7	93.9	103.0
1976	93.9	95.4	96.8	95.7	98.1	98.4	97.0	101.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.1	105.5	103.9	105.1	101.0	100.6	102.2	98.5
1979	109.1	109.3	107.3	108.8	100.3	99.8	101.7	98.1
1980	107.2	108.2	110.2	108.7	98.6	99.1	97.3	101.9
1981	108.9	109.3	113.8	110.5	98.6	99.6	95.7	104.1
1982	105.7	105.3	116.1	108.1	97.7	100.4	91.0	110.3
1983	110.6	106.9	118.7	110.0	100.6	103.5	93.2	111.1
1984	120.4	114.0	123.5	116.5	103.3	105.6	97.5	108.4
1985	124.8	116.9	127.8	119.7	104.3	106.8	97.7	109.4

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

5. Farming

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	87.4	309.2	76.7	206.9	42.3	28.3	114.1	24.8
1949	84.6	306.5	77.8	205.9	41.1	27.6	108.7	25.4
1950	90.4	283.6	80.0	194.0	46.6	31.9	113.0	28.2
1951	85.2	268.7	82.4	186.6	45.7	31.7	103.4	30.7
1952	87.3	255.5	83.2	179.6	48.6	34.1	104.9	32.5
1953	90.9	236.5	84.2	169.3	53.7	38.4	107.9	35.6
1954	93.2	229.7	84.9	165.9	56.2	40.6	109.7	37.0
1955	94.5	233.6	85.9	168.4	56.1	40.5	110.0	36.8
1956	92.1	222.4	86.0	162.2	56.8	41.4	107.1	38.7
1957	87.9	204.6	86.7	152.5	57.7	43.0	101.4	42.4
1958	90.7	189.7	87.1	144.3	62.8	47.8	104.1	45.9
1959	88.5	189.9	88.0	144.8	61.1	46.6	100.5	46.3
1960	93.2	183.2	88.2	141.0	66.1	50.9	105.7	48.1
1961	92.5	173.4	88.4	135.4	68.4	53.4	104.7	51.0
1962	91.8	168.1	88.9	132.5	69.3	54.6	103.3	52.9
1963	92.1	161.0	89.8	128.7	71.5	57.2	102.6	55.8
1964	88.7	152.3	90.0	123.7	71.7	58.3	98.5	59.1
1965	91.2	148.3	90.6	121.7	74.9	61.5	100.7	61.1
1966	83.0	134.4	91.2	113.8	72.9	61.8	91.0	67.9
1967	89.1	129.6	91.8	111.2	80.1	68.8	97.1	70.8
1968	84.9	126.8	92.2	109.8	77.3	67.0	92.1	72.7
1969	88.2	120.6	92.7	106.4	82.9	73.1	95.2	76.9
1970	92.9	113.7	93.5	103.4	89.9	81.7	99.4	82.2
1971	97.1	110.3	94.8	102.4	94.8	88.1	102.4	86.0
1972	97.4	111.4	95.8	103.4	94.2	87.4	101.7	85.9
1973	96.2	109.4	97.1	103.1	93.3	88.0	99.1	88.8
1974	96.0	109.3	98.5	103.8	92.5	87.8	97.4	90.2
1975	103.4	105.6	98.3	101.9	101.5	97.9	105.2	93.0
1976	99.4	100.9	99.0	100.0	99.4	98.5	100.4	98.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	98.4	101.8	101.2	101.4	97.0	96.6	97.2	99.4
1979	105.3	99.7	103.1	101.3	103.9	105.6	102.1	103.4
1980	105.6	97.2	103.4	100.3	105.4	108.7	102.2	106.4
1981	127.9	96.8	103.8	100.3	127.5	132.1	123.2	107.2
1982	131.6	93.9	103.3	98.6	133.4	140.1	127.4	109.9
1983	101.7	91.7	102.2	97.0	104.9	111.0	99.5	111.5
1984	118.2	90.5	101.8	96.2	122.9	130.6	116.1	112.5
1985	133.6	84.1	100.9	92.6	144.3	158.9	132.4	120.0

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

6. Manufacturing Industry

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	37.0	79.4	35.3	67.2	55.0	46.6	104.8	44.4
1949	35.1	72.4	35.5	62.3	56.4	48.5	98.7	49.1
1950	40.0	78.2	36.8	66.8	59.8	51.1	108.6	47.1
1951	44.7	84.2	39.7	71.9	62.2	53.1	112.6	47.2
1952	46.2	85.4	41.4	73.3	63.1	54.1	111.6	48.5
1953	49.6	89.8	42.9	76.9	64.5	55.3	115.5	47.8
1954	46.0	82.1	43.5	71.5	64.3	56.0	105.7	53.0
1955	50.8	86.6	45.1	75.3	67.5	58.7	112.5	52.1
1956	51.3	87.9	47.6	76.9	66.7	58.3	107.7	54.2
1957	51.5	86.5	49.1	76.4	67.5	59.6	104.9	56.8
1958	47.0	79.4	49.6	71.4	65.8	59.3	94.9	62.4
1959	52.4	84.6	50.7	75.5	69.4	61.9	103.4	59.9
1960	52.5	84.4	51.8	75.6	69.4	62.2	101.3	61.4
1961	52.6	82.3	53.0	74.5	70.7	64.0	99.2	64.5
1962	57.1	85.6	54.6	77.3	73.8	66.7	104.5	63.8
1963	61.6	86.5	56.1	78.4	78.6	71.2	109.8	64.9
1964	66.0	88.4	58.3	80.4	82.1	74.6	113.2	65.9
1965	71.7	93.6	61.4	85.0	84.3	76.6	116.8	65.6
1966	77.2	99.7	66.0	90.7	85.1	77.4	116.9	66.2
1967	77.0	99.5	70.0	91.7	84.0	77.4	110.0	70.3
1968	80.9	101.4	73.2	94.0	86.1	79.8	110.5	72.2
1969	83.2	103.0	76.6	96.1	86.6	80.8	108.6	74.4
1970	78.6	97.3	79.0	92.5	85.0	80.8	99.4	81.3
1971	79.9	93.7	80.8	90.3	88.5	85.3	98.8	86.3
1972	87.0	97.7	83.2	93.9	92.6	89.0	104.6	85.1
1973	96.3	103.1	86.7	98.8	97.5	93.4	111.1	84.1
1974	91.7	101.2	91.4	98.6	93.0	90.6	100.4	90.3
1975	84.9	91.4	93.4	91.9	92.3	92.9	90.9	102.2
1976	93.1	95.9	96.7	96.1	96.9	97.1	96.3	100.9
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.0	104.4	104.1	104.3	101.6	101.5	101.7	99.8
1979	108.1	106.5	108.3	107.0	101.0	101.4	99.8	101.6
1980	103.2	101.7	111.8	104.4	98.8	101.4	92.2	109.9
1981	104.8	101.1	115.3	104.9	100.0	103.6	90.9	114.1
1982	98.4	92.9	116.7	99.1	99.2	105.9	84.3	125.6
1983	104.7	93.5	117.6	99.8	104.9	112.0	89.1	125.8
1984	116.0	99.5	121.0	105.1	110.4	116.6	95.8	121.7
1985	120.4	98.9	122.8	105.2	114.5	121.7	98.1	124.1

TABLE IV. BUSINESS ECONOMY AND MAJOR SECTORS

7. Nonfarm Nonmanufacturing Industry

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	37.3	65.5	41.8	57.5	64.9	57.0	89.3	63.8
1949	36.9	64.7	42.4	57.1	64.6	57.0	86.9	65.6
1950	39.8	65.0	43.6	57.7	69.0	61.3	91.4	67.0
1951	42.3	67.0	44.6	59.3	71.2	63.1	94.8	66.6
1952	43.6	67.5	45.4	60.0	72.7	64.6	96.0	67.3
1953	45.1	68.1	46.5	60.7	74.4	66.3	97.2	68.2
1954	45.3	67.8	47.5	60.8	74.4	66.8	95.3	70.1
1955	47.9	70.0	48.9	62.7	76.3	68.4	97.9	69.8
1956	49.8	72.1	50.2	64.6	77.1	69.0	99.2	69.6
1957	50.6	72.1	51.5	65.0	77.9	70.2	98.3	71.4
1958	51.0	70.5	52.6	64.2	79.3	72.3	96.9	74.6
1959	54.2	72.8	54.1	66.2	81.8	74.5	100.1	74.4
1960	55.4	73.5	55.5	67.2	82.4	75.3	99.7	75.5
1961	56.9	73.2	57.0	67.5	84.2	77.6	99.7	77.9
1962	59.3	74.1	58.8	68.7	86.3	80.1	100.9	79.3
1963	61.4	74.9	60.7	69.9	87.8	82.0	101.1	81.0
1964	65.1	76.7	62.8	71.8	90.7	84.9	103.6	81.9
1965	68.6	78.7	65.3	74.0	92.8	87.2	105.2	82.9
1966	71.9	80.1	67.8	75.8	94.9	89.8	106.1	84.6
1967	74.6	80.6	70.2	76.9	97.0	92.6	106.3	87.1
1968	77.9	82.2	72.9	78.9	98.8	94.9	106.9	88.8
1969	80.0	85.5	76.1	82.2	97.3	93.6	105.1	89.0
1970	80.6	86.3	78.9	83.7	96.3	93.4	102.2	91.4
1971	83.1	87.5	82.0	85.5	97.1	95.0	101.4	93.7
1972	87.7	89.9	85.4	88.3	99.3	97.5	102.7	94.9
1973	91.5	93.2	89.2	91.8	99.7	98.1	102.6	95.6
1974	91.0	94.6	92.3	93.8	97.0	96.1	98.5	97.6
1975	90.7	93.4	94.4	93.8	96.7	97.1	96.1	101.1
1976	95.0	95.9	96.9	96.2	98.7	99.0	98.0	101.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.0	105.4	103.8	104.8	101.1	100.5	102.1	98.5
1979	107.9	109.7	108.3	109.2	98.7	98.3	99.6	98.8
1980	108.1	110.8	112.5	111.4	97.0	97.6	96.0	101.6
1981	109.9	112.1	117.1	113.9	96.6	98.1	93.9	104.4
1982	107.5	111.5	120.6	114.7	93.7	96.4	89.1	108.2
1983	112.2	113.7	123.6	117.2	95.7	98.7	90.8	108.7
1984	120.0	120.4	129.0	123.4	97.2	99.6	93.0	107.1
1985	123.3	124.9	134.4	128.2	96.1	98.7	91.7	107.6

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

1. Mining

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	57.4	113.9	37.9	87.0	65.9	50.3	151.4	33.3
1949	52.1	98.3	39.2	77.5	67.2	53.0	132.8	39.9
1950	57.7	99.3	41.1	78.9	73.1	58.1	140.3	41.4
1951	64.0	103.5	43.1	82.3	77.8	61.9	148.4	41.7
1952	64.5	100.5	45.7	81.4	79.3	64.2	141.1	45.5
1953	66.8	97.6	48.6	80.5	83.0	68.5	137.6	49.8
1954	66.0	89.1	51.7	76.2	86.6	74.1	127.8	58.0
1955	72.9	93.8	55.2	80.6	90.5	77.7	132.1	58.8
1956	76.4	97.5	58.8	84.3	90.7	78.4	130.1	60.3
1957	76.2	96.6	62.1	84.9	89.8	78.9	122.9	64.2
1958	70.6	85.2	64.6	78.5	89.9	82.9	109.3	75.9
1959	74.5	86.5	67.3	80.4	92.7	86.1	110.8	77.7
1960	74.6	84.0	69.6	79.4	94.0	88.8	107.2	82.9
1961	75.8	79.9	72.1	77.3	98.1	94.8	105.1	90.3
1962	77.8	78.0	74.5	76.7	101.4	99.7	104.4	95.4
1963	81.0	76.1	76.5	76.0	106.7	106.4	105.9	100.5
1964	83.7	76.9	79.0	77.3	108.4	108.9	105.9	102.8
1965	86.7	76.7	81.5	77.9	111.3	113.0	106.3	106.2
1966	91.1	77.1	83.6	78.8	115.7	118.2	109.0	108.5
1967	95.3	74.5	85.1	77.4	123.0	127.9	111.9	114.2
1968	98.8	73.2	86.2	76.9	128.5	135.0	114.6	117.8
1969	102.2	75.2	87.4	78.6	130.0	135.9	116.9	116.3
1970	106.6	74.7	87.9	78.4	136.0	142.7	121.2	117.7
1971	104.9	72.8	88.2	77.1	136.0	144.2	118.9	121.3
1972	106.5	75.0	88.6	78.9	135.1	141.9	120.2	118.1
1973	105.7	77.5	89.6	80.9	130.6	136.3	118.0	115.5
1974	103.2	83.3	91.1	85.5	120.8	124.0	113.3	109.4
1975	99.5	89.1	93.4	90.3	110.2	111.7	106.6	104.8
1976	98.5	94.6	96.0	95.0	103.7	104.1	102.7	101.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.1	104.7	104.7	104.7	97.5	97.5	97.5	100.0
1979	103.0	116.2	109.9	114.4	90.1	88.7	93.7	94.6
1980	107.5	125.5	116.2	122.9	87.5	85.6	92.5	92.6
1981	110.8	140.4	125.4	136.2	81.3	78.9	88.3	89.3
1982	104.7	136.7	132.6	135.6	77.2	76.6	79.0	97.0
1983	99.4	114.6	136.6	120.8	82.3	86.8	72.7	119.3
1984	105.4	118.8	141.5	125.2	84.2	88.7	74.5	119.1
1985	103.5	118.1	144.9	125.6	82.4	87.6	71.4	122.8

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

2. Contract Construction

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	54.5	65.4	31.5	62.1	87.8	83.4	173.0	48.2
1949	54.1	64.6	32.9	61.5	88.0	83.8	164.4	51.0
1950	60.6	67.4	36.0	64.3	94.3	90.0	168.3	53.5
1951	67.2	73.8	39.4	70.4	95.4	91.0	170.5	53.4
1952	70.2	75.4	42.1	72.1	97.4	93.1	167.0	55.8
1953	72.6	73.6	43.4	70.5	103.0	98.7	167.2	59.0
1954	75.6	72.2	44.8	69.4	108.9	104.6	168.7	62.0
1955	80.7	76.2	46.6	73.1	110.4	106.0	173.4	61.1
1956	86.4	81.2	47.7	77.8	111.1	106.4	181.4	58.7
1957	86.3	78.9	48.5	75.8	113.8	109.3	178.0	61.4
1958	89.4	75.7	48.6	72.8	122.7	118.1	184.0	64.2
1959	97.2	80.0	49.3	76.9	126.4	121.4	197.2	61.6
1960	98.8	78.1	49.5	75.2	131.5	126.5	199.7	63.3
1961	100.0	77.1	49.5	74.2	134.7	129.7	201.8	64.3
1962	104.5	78.6	49.8	75.6	138.2	133.0	210.0	63.3
1963	107.5	80.7	51.6	77.7	138.4	133.2	208.5	63.9
1964	112.6	82.9	54.3	79.9	140.9	135.8	207.5	65.5
1965	117.3	85.5	57.4	82.5	142.2	137.2	204.4	67.1
1966	117.8	87.9	60.4	84.9	138.7	134.0	194.9	68.8
1967	115.5	84.4	63.8	82.1	140.7	136.8	180.9	75.6
1968	115.2	83.5	66.7	81.5	141.4	138.0	172.8	79.9
1969	111.2	90.9	70.5	88.5	125.6	122.4	157.8	77.6
1970	101.7	89.3	73.6	87.4	116.4	114.0	138.2	82.5
1971	98.6	92.2	76.6	90.4	109.1	106.9	128.7	83.1
1972	101.0	96.5	80.0	94.6	106.8	104.6	126.2	82.9
1973	103.2	101.8	86.2	100.0	103.2	101.4	119.7	84.7
1974	98.3	101.1	92.0	100.0	98.3	97.3	106.8	91.0
1975	90.5	90.0	94.7	90.6	100.0	100.6	95.5	105.3
1976	95.8	92.6	96.6	93.1	102.9	103.4	99.2	104.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.0	111.6	105.6	110.7	96.7	95.9	101.4	94.6
1979	105.1	117.8	109.0	116.5	90.2	89.3	96.5	92.5
1980	97.9	114.1	110.1	113.4	86.3	85.8	89.0	96.4
1981	89.3	110.1	112.6	110.2	81.0	81.1	79.3	102.2
1982	85.4	102.2	109.3	102.8	83.0	83.5	78.1	107.0
1983	89.3	106.2	105.5	105.9	84.3	84.1	84.6	99.3
1984	96.9	118.2	103.7	116.3	83.3	81.9	93.4	87.7
1985	98.8	126.4	102.7	123.4	80.1	78.2	96.2	81.2

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

3. Total Transportation

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	60.6	117.2	106.4	114.6	52.9	51.7	56.9	90.8
1949	52.8	106.9	105.6	106.5	49.6	49.4	49.9	98.8
1950	55.0	105.8	104.8	105.4	52.1	52.0	52.4	99.1
1951	59.6	110.2	105.2	108.9	54.7	54.1	56.7	95.5
1952	57.7	107.6	103.7	106.6	54.1	53.6	55.7	96.3
1953	57.3	106.9	103.0	105.9	54.1	53.6	55.6	96.4
1954	53.3	99.6	101.7	100.0	53.3	53.5	52.5	102.1
1955	57.9	102.1	100.4	101.6	57.0	56.7	57.7	98.3
1956	60.0	102.9	99.8	102.0	58.8	58.3	60.2	97.0
1957	59.4	100.3	99.2	99.9	59.5	59.3	59.9	98.9
1958	54.9	91.8	97.4	93.0	59.1	59.9	56.4	106.1
1959	57.6	94.3	96.4	94.7	60.9	61.1	59.8	102.2
1960	58.3	93.2	95.5	93.6	62.3	62.6	61.1	102.4
1961	57.9	90.6	94.3	91.3	63.4	63.9	61.4	104.1
1962	60.3	90.9	93.4	91.4	65.9	66.3	64.5	102.7
1963	63.5	90.7	92.8	91.1	69.7	70.0	68.4	102.3
1964	65.4	92.1	92.4	92.1	71.0	71.0	70.7	100.4
1965	70.9	94.9	92.4	94.3	75.2	74.7	76.7	97.4
1966	76.8	97.1	92.7	96.1	80.0	79.1	82.9	95.5
1967	76.3	90.6	93.2	91.1	83.8	84.2	81.9	102.9
1968	79.6	97.2	94.0	96.5	82.5	81.8	84.7	96.7
1969	82.5	99.1	94.9	98.1	84.1	83.3	87.0	95.8
1970	81.4	97.6	95.2	97.1	83.9	83.4	85.5	97.5
1971	81.1	95.5	95.4	95.5	84.9	84.9	84.9	99.9
1972	87.4	97.9	95.7	97.4	89.8	89.3	91.3	97.8
1973	93.1	101.0	97.2	100.1	93.0	92.2	95.9	96.2
1974	94.2	99.9	98.3	99.5	94.6	94.3	95.8	98.4
1975	87.6	94.4	98.6	95.4	91.8	92.7	88.8	104.4
1976	94.4	96.5	99.3	97.1	97.2	97.8	95.1	102.9
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.8	104.9	101.7	104.1	102.6	101.8	105.1	96.9
1979	109.0	108.1	103.4	107.0	101.9	100.9	105.4	95.7
1980	102.6	104.3	104.7	104.3	98.3	98.4	98.0	100.4
1981	96.3	103.7	105.3	104.0	92.6	92.9	91.4	101.6
1982	87.7	93.3	104.9	96.0	91.4	94.0	83.6	112.4
1983	90.1	96.0	104.5	97.9	92.0	93.9	86.2	108.8
1984	98.5	102.5	104.5	102.9	95.7	96.1	94.2	102.0
1985	98.9	105.3	104.5	105.1	94.1	93.9	94.6	99.3

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

3a. Railroad Transportation

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	108.0	299.6	164.2	261.1	41.4	36.0	65.8	54.8
1949	89.9	255.0	162.5	228.7	39.3	35.3	55.3	63.7
1950	96.3	242.0	160.3	218.8	44.0	39.8	60.0	66.3
1951	108.5	253.3	158.6	226.4	47.9	42.8	68.4	62.6
1952	103.9	242.2	156.9	218.0	47.7	42.9	66.2	64.8
1953	101.2	237.8	155.1	214.3	47.2	42.6	65.3	65.2
1954	90.8	210.8	152.2	194.2	46.7	43.1	59.6	72.2
1955	100.5	214.5	149.5	196.0	51.3	46.9	67.2	69.7
1956	102.6	210.6	147.4	192.7	53.3	48.7	69.6	70.0
1957	96.7	198.3	145.6	183.3	52.7	48.8	66.4	73.4
1958	84.8	168.5	142.5	161.2	52.6	50.3	59.5	84.6
1959	89.2	163.7	139.4	156.8	56.9	54.5	64.0	85.2
1960	87.9	155.8	136.7	150.4	58.5	56.4	64.3	87.7
1961	87.1	145.7	133.5	142.2	61.2	59.7	65.2	91.6
1962	90.7	143.0	130.8	139.5	65.0	63.4	69.3	91.5
1963	95.3	139.3	128.6	136.2	70.0	68.4	74.1	92.3
1964	100.0	138.3	126.4	134.9	74.1	72.3	79.1	91.4
1965	107.9	134.9	124.5	132.0	81.8	80.0	86.7	92.3
1966	115.8	132.8	122.4	129.9	89.1	87.1	94.6	92.1
1967	109.8	125.8	120.2	124.1	88.5	87.3	91.4	95.5
1968	108.8	122.2	117.9	120.9	90.0	89.0	92.3	96.4
1969	111.7	119.5	115.8	118.4	94.3	93.5	96.4	96.9
1970	107.0	116.7	113.5	115.7	92.5	91.8	94.3	97.2
1971	96.1	109.1	111.5	109.8	87.5	88.1	86.2	102.2
1972	97.0	106.6	109.1	107.4	90.4	91.0	88.9	102.4
1973	101.4	107.6	107.5	107.6	94.2	94.2	94.3	99.9
1974	103.9	108.3	106.1	107.7	96.5	95.9	97.9	97.9
1975	94.9	100.4	104.0	101.5	93.5	94.5	91.3	103.6
1976	100.1	99.4	101.9	100.1	100.0	100.8	98.3	102.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	103.0	99.4	99.5	99.4	103.6	103.6	103.5	100.1
1979	103.4	102.7	98.7	101.5	101.9	100.7	104.7	96.1
1980	101.1	96.1	97.2	96.4	104.8	105.2	104.0	101.2
1981	92.0	89.4	95.6	91.3	100.7	102.8	96.2	106.8
1982	70.7	76.0	93.5	81.3	86.9	92.9	75.6	122.9
1983	70.8	66.7	91.3	74.1	95.5	106.1	77.6	136.8
1984	79.1	66.7	89.4	73.5	107.7	118.7	88.6	134.0
1985	78.8	63.9	87.7	71.1	110.9	123.5	89.9	137.3

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

3b. Nonrail Transportation

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	47.7	73.8	48.4	68.9	69.3	64.6	98.7	65.5
1949	42.7	71.7	48.4	67.1	63.6	59.5	88.1	67.6
1950	43.8	73.4	48.9	68.6	63.8	59.6	89.4	66.7
1951	46.4	76.2	51.5	71.4	65.0	60.9	90.1	67.6
1952	45.2	75.6	50.1	70.7	63.9	59.7	90.1	66.3
1953	45.4	75.8	50.6	70.9	64.0	59.9	89.6	66.8
1954	43.2	73.2	50.8	68.8	62.8	59.0	84.9	69.4
1955	46.4	75.5	51.1	70.7	65.6	61.4	90.8	67.7
1956	48.4	77.3	51.9	72.3	67.0	62.7	93.4	67.1
1957	49.3	77.0	52.6	72.2	68.3	64.0	93.8	68.3
1958	46.8	73.6	52.1	69.3	67.6	63.7	90.0	70.7
1959	49.1	77.9	53.2	73.0	67.2	63.0	92.3	68.3
1960	50.3	78.4	54.0	73.6	68.4	64.2	93.1	68.9
1961	50.0	77.5	54.9	73.0	68.5	64.5	91.2	70.8
1962	52.0	78.6	55.8	74.0	70.2	66.2	93.2	71.0
1963	54.9	79.2	56.8	74.7	73.4	69.3	96.5	71.8
1964	56.0	81.1	58.2	76.5	73.2	69.0	96.2	71.7
1965	60.9	85.4	60.1	80.4	75.7	71.3	101.3	70.4
1966	66.3	88.6	62.9	83.5	79.4	74.8	105.4	71.0
1967	67.2	82.2	66.1	78.8	85.2	81.7	101.7	80.4
1968	71.7	91.3	70.0	87.0	82.4	78.5	102.4	76.7
1969	74.6	94.2	73.9	90.0	82.9	79.2	101.0	78.5
1970	74.5	93.1	76.9	89.8	83.0	80.0	96.9	82.6
1971	77.0	92.3	79.3	89.6	85.9	83.4	97.1	85.9
1972	84.8	95.8	82.3	93.0	91.2	88.6	103.1	85.9
1973	90.9	99.5	86.8	96.9	93.9	91.4	104.8	87.2
1974	91.5	97.9	90.4	96.3	95.0	93.5	101.3	92.3
1975	85.6	93.0	93.2	93.1	91.9	92.0	91.8	100.2
1976	92.9	95.8	96.6	96.0	96.7	96.9	96.1	100.8
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.9	106.2	103.9	105.7	102.1	101.6	103.8	97.8
1979	110.6	109.4	108.2	109.1	101.4	101.1	102.2	99.0
1980	103.0	106.2	112.1	107.4	95.9	96.9	91.8	105.6
1981	97.5	107.0	115.1	108.7	89.7	91.1	84.7	107.6
1982	92.4	97.4	116.4	101.3	91.2	94.8	79.3	119.5
1983	95.3	102.9	117.7	105.9	90.0	92.6	81.0	114.4
1984	103.8	111.0	119.8	112.8	92.0	93.5	86.6	108.0
1985	104.3	115.2	121.5	116.4	89.6	90.6	85.9	105.5

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

4. Communications

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	14.6	75.8	17.4	52.8	27.6	19.2	84.0	22.9
1949	15.3	73.0	18.5	51.3	29.8	20.9	82.5	25.4
1950	16.2	70.1	19.7	49.7	32.6	23.1	82.1	28.1
1951	18.0	71.6	20.8	50.9	35.4	25.2	86.7	29.0
1952	19.1	73.1	22.0	52.1	36.6	26.1	86.6	30.2
1953	20.9	75.6	23.4	54.0	38.8	27.7	89.3	31.0
1954	21.5	74.4	24.7	53.6	40.1	28.9	86.9	33.2
1955	23.6	74.3	26.2	53.8	43.8	31.7	90.0	35.3
1956	25.0	76.4	28.3	55.6	44.9	32.7	88.2	37.1
1957	26.8	75.7	30.2	55.7	48.1	35.4	88.7	39.9
1958	27.8	71.1	31.6	53.0	52.4	39.1	87.8	44.5
1959	29.7	70.3	33.3	52.9	56.2	42.2	89.2	47.4
1960	31.5	71.0	35.5	54.2	58.1	44.3	88.8	49.9
1961	32.9	69.7	37.5	54.5	60.4	47.2	87.6	53.8
1962	35.3	70.1	39.9	55.8	63.2	50.3	88.5	56.8
1963	37.7	70.2	42.5	57.0	66.1	53.7	88.6	60.6
1964	40.0	72.4	45.1	59.4	67.4	55.2	88.6	62.3
1965	43.4	75.9	48.3	62.7	69.2	57.2	89.9	63.6
1966	47.4	79.8	51.6	66.3	71.5	59.4	91.8	64.7
1967	51.0	81.0	55.0	68.5	74.4	62.9	92.7	67.9
1968	54.8	82.7	58.5	71.0	77.2	66.2	93.7	70.7
1969	60.5	89.3	62.6	76.4	79.2	67.7	96.6	70.1
1970	66.2	94.0	67.2	81.0	81.7	70.4	98.4	71.6
1971	69.6	91.7	71.6	81.9	84.9	75.9	97.1	78.1
1972	76.1	96.4	75.8	86.4	88.0	78.9	100.4	78.6
1973	81.7	99.2	81.1	90.4	90.3	82.3	100.7	81.8
1974	85.6	100.5	86.4	93.7	91.4	85.2	99.1	86.0
1975	89.3	97.7	90.6	94.2	94.7	91.4	98.6	92.7
1976	94.0	96.9	94.6	95.8	98.1	97.0	99.4	97.6
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	109.4	105.3	106.7	105.9	103.3	103.9	102.6	101.3
1979	117.1	110.8	114.6	112.6	104.1	105.8	102.2	103.5
1980	126.8	115.0	121.6	118.1	107.3	110.3	104.3	105.8
1981	133.9	117.7	128.9	123.1	108.8	113.7	103.9	109.5
1982	138.4	119.1	135.1	126.8	109.2	116.2	102.5	113.5
1983	148.8	111.3	141.2	125.8	118.3	133.7	105.4	126.9
1984	149.9	114.4	148.2	130.7	114.7	131.0	101.1	129.6
1985	150.6	113.4	155.5	133.8	112.6	132.8	96.9	137.1

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

5. Public Utilities

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	16.4	82.4	32.2	53.7	30.6	19.9	51.1	39.1
1949	18.2	82.7	33.6	54.6	33.4	22.0	54.2	40.7
1950	19.8	82.9	35.4	55.5	35.7	23.9	56.1	42.7
1951	23.0	82.7	37.0	56.2	40.9	27.8	62.0	44.8
1952	24.7	82.3	38.7	56.8	43.4	30.0	63.8	47.0
1953	26.6	82.6	40.5	57.8	46.0	32.2	65.6	49.0
1954	29.2	82.3	42.2	58.5	50.0	35.5	69.3	51.3
1955	30.6	82.7	43.7	59.4	51.6	37.0	70.0	52.9
1956	33.0	82.2	45.6	60.1	55.0	40.2	72.4	55.5
1957	35.2	83.0	47.6	61.4	57.4	42.5	74.1	57.3
1958	36.8	82.5	49.4	62.1	59.2	44.5	74.4	59.9
1959	40.3	82.9	51.3	63.1	63.8	48.6	78.4	61.9
1960	43.2	83.2	53.0	64.3	67.3	52.0	81.6	63.7
1961	45.5	82.8	54.6	65.1	69.8	54.9	83.3	65.9
1962	47.8	82.4	56.0	65.9	72.5	57.9	85.3	67.9
1963	50.3	83.6	57.6	67.3	74.7	60.1	87.3	68.9
1964	53.7	83.6	59.2	68.2	78.7	64.3	90.8	70.8
1965	56.2	85.8	61.1	70.3	79.9	65.4	91.9	71.2
1966	59.7	86.7	63.4	72.1	82.8	68.8	94.1	73.1
1967	62.6	88.3	66.2	74.4	84.1	70.9	94.5	75.0
1968	68.6	89.4	69.3	76.7	89.4	76.7	99.0	77.5
1969	73.0	92.4	72.6	79.9	91.3	79.0	100.5	78.6
1970	74.9	95.1	76.1	83.1	90.1	78.8	98.5	80.0
1971	80.2	94.6	79.5	85.1	94.2	84.8	100.9	84.0
1972	82.6	96.8	83.5	88.4	93.4	85.3	99.0	86.2
1973	93.2	99.5	87.7	92.1	101.2	93.6	106.2	88.2
1974	95.7	100.2	91.9	95.0	100.8	95.6	104.2	91.8
1975	100.3	98.0	94.9	96.0	104.5	102.4	105.7	96.9
1976	99.3	98.2	97.0	97.4	101.9	101.1	102.4	98.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.3	105.5	102.7	103.7	98.7	97.0	99.6	97.4
1979	103.6	109.0	105.0	106.5	97.3	95.1	98.7	96.3
1980	106.4	111.8	107.6	109.1	97.5	95.2	98.9	96.2
1981	114.2	115.3	110.3	112.1	101.9	99.1	103.5	95.7
1982	114.5	117.6	112.3	114.3	100.2	97.4	102.0	95.5
1983	114.5	118.5	114.0	115.6	99.0	96.6	100.5	96.2
1984	124.3	121.2	116.2	118.0	105.4	102.6	107.0	95.8
1985	131.0	123.8	120.0	121.4	107.9	105.8	109.2	96.9

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

6. Trade

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	33.8	72.2	30.6	65.1	51.9	46.8	110.2	42.4
1949	34.7	72.5	30.9	65.3	53.0	47.8	112.2	42.6
1950	38.0	72.8	33.2	66.1	57.5	52.2	114.3	45.7
1951	38.3	74.1	33.8	67.3	57.0	51.7	113.4	45.6
1952	39.5	74.0	34.1	67.3	58.8	53.4	116.0	46.1
1953	40.8	74.6	34.8	67.9	60.1	54.7	117.2	46.7
1954	41.1	74.9	35.5	68.3	60.2	54.9	115.8	47.4
1955	44.9	76.7	37.8	70.3	63.9	58.5	118.8	49.2
1956	46.2	78.4	38.7	71.8	64.4	59.0	119.4	49.4
1957	47.0	78.3	39.4	71.9	65.3	60.0	119.1	50.4
1958	46.9	77.4	39.9	71.3	65.8	60.6	117.7	51.5
1959	50.2	80.0	41.7	73.8	68.1	62.8	120.5	52.1
1960	51.2	81.0	43.1	74.8	68.4	63.2	118.7	53.3
1961	51.7	80.4	44.0	74.5	69.4	64.3	117.5	54.7
1962	55.1	80.9	45.8	75.2	73.2	68.1	120.3	56.5
1963	57.2	80.4	48.0	75.1	76.1	71.1	119.2	59.6
1964	60.7	82.8	50.5	77.5	78.2	73.2	120.2	60.9
1965	64.7	85.1	53.9	79.9	80.9	76.0	120.0	63.4
1966	68.1	85.4	58.0	80.9	84.2	79.8	117.5	67.9
1967	70.0	84.6	60.8	80.6	86.8	82.7	115.1	71.8
1968	74.0	84.0	64.4	80.7	91.7	88.1	115.0	76.7
1969	75.5	91.7	68.5	87.8	85.9	82.3	110.3	74.6
1970	76.7	88.2	71.8	85.4	89.8	87.0	106.9	81.4
1971	80.5	89.8	76.3	87.5	92.0	89.6	105.5	84.9
1972	86.6	92.3	80.3	90.3	95.8	93.7	107.8	87.0
1973	91.2	94.7	85.5	93.1	97.9	96.3	106.6	90.4
1974	88.9	94.4	89.9	93.7	94.9	94.2	98.9	95.2
1975	90.4	94.6	90.8	93.9	96.2	95.6	99.6	96.0
1976	94.8	97.0	95.1	96.7	98.1	97.8	99.7	98.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.8	103.6	106.1	104.1	100.7	101.2	98.8	102.4
1979	106.8	105.4	110.0	106.2	100.5	101.3	97.1	104.4
1980	104.4	104.4	112.4	105.8	98.7	100.0	92.9	107.7
1981	105.9	104.9	117.0	107.0	98.9	100.9	90.5	111.5
1982	105.7	103.2	119.1	105.9	99.8	102.4	88.8	115.4
1983	110.4	105.9	124.3	109.1	101.2	104.2	88.8	117.3
1984	120.7	112.1	134.3	115.9	104.1	107.6	89.8	119.8
1985	126.1	115.2	142.2	119.8	105.2	109.4	88.7	123.4

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

7. Finance and Insurance

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	30.7	44.4	23.4	39.8	77.2	69.2	131.2	52.8
1949	31.6	44.9	23.4	40.2	78.6	70.3	135.0	52.1
1950	33.4	46.0	23.7	41.1	81.2	72.6	140.8	51.5
1951	35.6	47.3	23.9	42.1	84.6	75.3	148.9	50.6
1952	37.4	49.0	24.0	43.5	86.1	76.3	155.9	49.0
1953	39.2	50.6	24.4	44.8	87.6	77.5	160.7	48.2
1954	40.7	52.5	24.9	46.3	87.9	77.6	163.3	47.5
1955	43.7	54.6	25.9	48.2	90.7	80.0	168.7	47.4
1956	46.4	55.6	27.0	49.2	94.2	83.4	171.8	48.6
1957	48.5	56.5	27.9	50.1	96.7	85.8	173.6	49.4
1958	48.3	57.9	28.8	51.5	93.9	83.5	167.8	49.8
1959	49.8	59.8	30.3	53.3	93.4	83.2	164.5	50.6
1960	52.6	61.8	31.7	55.2	95.3	85.1	166.2	51.2
1961	54.1	63.1	32.8	56.5	95.8	85.8	164.8	52.1
1962	56.0	65.0	34.6	58.4	95.8	86.1	161.6	53.3
1963	57.4	66.2	36.0	59.8	96.1	86.8	159.4	54.5
1964	59.1	68.3	38.6	62.2	95.1	86.5	153.3	56.4
1965	61.5	70.2	41.6	64.4	95.4	87.7	147.9	59.3
1966	64.3	71.0	44.2	65.9	97.5	90.5	145.2	62.3
1967	67.4	73.2	47.2	68.4	98.6	92.2	142.8	64.5
1968	71.7	76.7	51.4	72.3	99.2	93.5	139.7	66.9
1969	76.7	80.9	55.6	76.7	99.9	94.8	137.8	68.8
1970	78.7	82.5	59.5	78.7	100.0	95.4	132.4	72.1
1971	79.8	84.5	63.9	81.1	98.4	94.5	125.0	75.5
1972	83.7	87.2	68.4	84.1	99.5	95.9	122.3	78.5
1973	88.4	90.8	74.6	88.1	100.4	97.4	118.5	82.2
1974	91.5	93.1	81.2	91.1	100.4	98.3	112.6	87.2
1975	92.7	94.9	87.2	93.6	99.0	97.7	106.3	91.9
1976	95.8	96.6	93.2	96.0	99.8	99.2	102.8	96.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	103.9	107.0	107.7	107.1	97.0	97.1	96.4	100.7
1979	108.0	111.4	115.7	112.1	96.4	97.0	93.3	103.9
1980	111.0	113.8	123.9	115.4	96.2	97.6	89.6	108.9
1981	114.7	117.9	132.7	120.4	95.3	97.2	86.4	112.5
1982	117.8	122.0	141.0	125.1	94.2	96.6	83.6	115.5
1983	121.2	124.7	151.3	129.1	93.9	97.2	80.1	121.3
1984	125.5	129.1	165.8	135.1	92.9	97.2	75.7	128.4
1985	128.8	144.2	184.7	150.8	85.4	89.4	69.7	128.1

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

8. Real Estate

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	30.4	53.5	45.2	45.8	66.4	56.9	67.3	84.5
1949	31.1	54.2	45.8	46.4	67.0	57.3	67.8	84.5
1950	32.7	54.8	46.7	47.3	69.1	59.6	69.9	85.3
1951	33.2	55.5	47.4	48.0	69.1	59.8	69.9	85.5
1952	34.5	56.5	48.1	48.7	70.9	61.1	71.7	85.2
1953	35.8	58.1	48.9	49.5	72.3	61.6	73.3	84.1
1954	36.9	60.0	49.8	50.5	73.0	61.5	74.2	82.9
1955	39.2	62.0	50.8	51.7	75.9	63.2	77.2	81.9
1956	40.4	62.8	51.8	52.7	76.8	64.4	78.0	82.5
1957	42.6	64.0	52.8	53.7	79.3	66.5	80.6	82.6
1958	44.1	65.5	54.1	55.0	80.2	67.2	81.4	82.5
1959	47.5	66.7	55.7	56.5	84.0	71.2	85.2	83.5
1960	48.9	67.0	57.2	57.9	84.6	73.1	85.6	85.4
1961	50.5	66.1	59.0	59.5	84.9	76.4	85.7	89.2
1962	53.3	67.4	61.1	61.6	86.6	79.1	87.2	90.7
1963	55.5	73.1	63.4	64.1	86.6	75.9	87.5	86.7
1964	57.9	74.2	65.7	66.3	87.3	78.0	88.1	88.5
1965	61.8	74.3	68.2	68.7	90.0	83.2	90.6	91.8
1966	63.6	72.0	70.7	70.8	89.9	88.4	90.1	98.1
1967	65.2	72.9	72.9	72.9	89.4	89.3	89.4	99.9
1968	68.2	72.7	75.5	75.3	90.6	93.9	90.4	103.9
1969	72.8	77.5	78.7	78.6	92.6	93.9	92.5	101.5
1970	73.1	79.0	81.6	81.4	89.8	92.5	89.6	103.3
1971	78.6	84.0	84.9	84.8	92.7	93.5	92.6	101.0
1972	81.7	88.4	88.8	88.8	92.0	92.4	92.0	100.5
1973	85.3	91.5	92.4	92.4	92.4	93.2	92.3	101.0
1974	87.0	92.5	94.7	94.5	92.0	94.0	91.9	102.3
1975	88.6	91.6	96.2	95.9	92.4	96.7	92.1	105.1
1976	94.4	93.8	97.8	97.5	96.8	100.6	96.6	104.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.9	110.9	102.8	103.4	103.3	96.4	104.0	92.7
1979	110.0	119.2	108.5	109.4	100.6	92.3	101.4	91.0
1980	105.6	120.9	113.8	114.4	92.2	87.3	92.8	94.2
1981	105.6	119.5	118.6	118.8	88.9	88.4	89.0	99.3
1982	101.6	111.6	123.4	122.7	82.8	91.0	82.3	110.5
1983	105.2	120.2	125.8	125.5	83.8	87.6	83.6	104.7
1984	108.5	129.8	131.8	131.8	82.3	83.6	82.3	101.5
1985	114.0	134.6	137.9	137.8	82.7	84.7	82.7	102.5

TABLE V. MAJOR NONFARM NONMANUFACTURING INDUSTRIES

9. Services

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	31.8	44.4	27.9	38.9	81.7	71.5	113.9	62.8
1949	32.4	45.2	28.7	39.7	81.8	71.8	113.0	63.6
1950	34.2	45.2	29.8	40.0	85.4	75.5	114.7	65.8
1951	35.9	46.1	31.0	40.9	87.8	78.0	115.9	67.3
1952	38.0	47.7	32.3	42.4	89.6	79.7	117.6	67.8
1953	39.8	49.2	33.8	43.9	90.7	80.9	117.7	68.7
1954	38.6	50.2	35.5	45.1	85.7	76.9	108.7	70.8
1955	36.4	52.5	37.4	47.2	77.1	69.3	97.2	71.3
1956	36.6	54.9	39.3	49.5	73.9	66.5	93.0	71.6
1957	37.4	56.2	41.2	50.9	73.5	66.5	90.8	73.2
1958	40.2	55.7	42.9	51.0	78.9	72.2	93.8	77.0
1959	41.7	57.3	44.8	52.6	79.2	72.8	93.0	78.3
1960	42.5	59.1	46.8	54.5	77.9	71.8	90.7	79.2
1961	46.2	60.1	49.0	56.0	82.5	76.8	94.2	81.6
1962	46.7	61.3	51.3	57.5	81.1	76.2	90.9	83.7
1963	47.4	63.6	53.8	59.9	79.1	74.5	88.2	84.5
1964	53.3	64.5	56.4	61.5	86.7	82.7	94.6	87.4
1965	55.6	66.1	59.1	63.5	87.5	84.1	94.0	89.5
1966	59.2	68.8	62.0	66.2	89.3	86.1	95.5	90.1
1967	66.3	73.5	64.9	70.3	94.3	90.2	102.1	88.3
1968	69.4	77.8	68.4	74.3	93.4	89.2	101.4	87.9
1969	71.1	73.2	72.0	72.8	97.6	97.0	98.7	98.3
1970	73.5	80.9	75.3	79.0	93.0	90.8	97.6	93.1
1971	77.9	81.9	78.6	80.8	96.4	95.0	99.0	96.0
1972	82.9	83.2	82.4	82.9	100.0	99.7	100.6	99.1
1973	85.2	87.3	86.6	87.1	97.9	97.6	98.5	99.1
1974	85.7	91.9	90.4	91.4	93.8	93.3	94.9	98.4
1975	87.3	92.1	93.4	92.5	94.4	94.9	93.5	101.4
1976	92.7	95.2	96.4	95.6	96.9	97.3	96.1	101.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.8	105.0	104.0	104.7	103.8	103.5	104.6	99.0
1979	110.5	111.7	107.7	110.4	100.1	98.9	102.6	96.4
1980	117.7	117.0	111.3	115.1	102.2	100.6	105.7	95.2
1981	125.7	120.1	115.1	118.5	106.1	104.6	109.2	95.8
1982	121.1	125.1	118.0	122.7	98.7	96.8	102.6	94.4
1983	131.9	128.1	121.8	126.0	104.7	103.0	108.3	95.1
1984	140.5	135.0	126.5	132.1	106.3	104.1	111.1	93.7
1985	143.1	138.5	131.1	136.0	105.2	103.3	109.2	94.7

TABLE VI. MANUFACTURING INDUSTRIES

1. Food

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	47.6	112.5	62.2	98.7	48.2	42.3	76.6	55.3
1949	46.5	110.0	63.0	97.2	47.9	42.3	73.8	57.3
1950	49.7	110.1	64.3	97.7	50.9	45.1	77.4	58.3
1951	50.3	112.5	66.2	100.0	50.3	44.7	76.1	58.8
1952	53.2	112.2	66.4	99.8	53.3	47.4	80.1	59.2
1953	56.4	111.9	66.5	99.7	56.6	50.4	84.8	59.4
1954	55.7	110.1	66.5	98.4	56.6	50.6	83.7	60.4
1955	56.9	110.8	67.3	99.1	57.4	51.4	84.5	60.8
1956	59.5	111.2	68.0	99.6	59.7	53.5	87.5	61.1
1957	61.6	107.9	67.8	97.3	63.3	57.1	90.8	62.9
1958	62.1	106.1	67.8	95.9	64.7	58.5	91.5	63.9
1959	63.0	107.1	68.3	96.8	65.1	58.8	92.3	63.8
1960	64.3	107.0	68.6	96.8	66.4	60.1	93.7	64.2
1961	64.8	106.2	69.7	96.5	67.1	61.0	92.9	65.7
1962	67.5	105.6	71.2	96.5	70.0	64.0	94.9	67.4
1963	72.4	104.7	72.5	96.2	75.3	69.2	99.9	69.3
1964	73.2	104.5	73.9	96.4	76.0	70.1	99.2	70.7
1965	76.4	105.7	74.4	97.4	78.4	72.3	102.7	70.4
1966	80.7	106.3	76.7	98.5	81.9	75.8	105.2	72.1
1967	79.4	106.4	79.2	99.3	80.0	74.6	100.3	74.4
1968	81.1	105.8	81.0	99.3	81.6	76.6	100.1	76.6
1969	84.4	106.6	82.4	100.3	84.2	79.2	102.5	77.3
1970	85.6	105.3	84.1	99.7	85.8	81.3	101.7	79.9
1971	88.7	103.3	86.2	98.8	89.8	85.9	103.0	83.4
1972	94.3	102.8	88.0	98.9	95.3	91.8	107.2	85.6
1973	101.9	101.0	89.4	97.9	104.0	100.9	114.0	88.5
1974	91.9	100.2	91.7	97.9	93.9	91.8	100.3	91.5
1975	94.1	97.3	94.7	96.6	97.4	96.7	99.4	97.3
1976	100.0	99.8	97.8	99.3	100.7	100.2	102.3	98.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	101.4	100.0	102.6	100.7	100.7	101.5	98.9	102.6
1979	107.2	101.0	105.3	102.2	104.9	106.1	101.8	104.2
1980	110.7	99.3	107.3	101.4	109.1	111.5	103.1	108.1
1981	113.6	97.2	109.6	100.5	113.0	116.9	103.6	112.8
1982	119.9	94.2	111.4	98.7	121.5	127.4	107.7	118.3
1983	121.0	92.4	111.9	97.6	124.1	131.0	108.2	121.0
1984	122.7	93.0	113.4	98.4	124.7	132.0	108.2	122.0
1985	124.6	94.5	114.9	99.9	124.7	131.8	108.5	121.5

TABLE VI. MANUFACTURING INDUSTRIES

2. Tobacco

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	54.1	162.5	48.3	97.0	55.8	33.3	111.9	29.7
1949	58.0	151.9	47.1	91.5	63.4	38.2	123.2	31.0
1950	54.9	146.1	48.3	89.4	61.5	37.6	113.8	33.1
1951	66.2	149.1	52.6	92.8	71.4	44.4	125.8	35.3
1952	64.3	150.9	52.4	93.5	68.8	42.6	122.7	34.7
1953	59.2	147.2	52.4	91.7	64.6	40.2	113.1	35.6
1954	55.6	144.8	51.9	90.5	61.4	38.4	107.0	35.9
1955	59.1	147.6	54.0	92.7	63.8	40.0	109.4	36.6
1956	62.7	143.9	57.1	92.4	67.9	43.6	109.8	39.7
1957	65.2	138.8	56.3	89.7	72.7	47.0	115.8	40.6
1958	69.6	137.8	56.2	89.2	78.0	50.5	123.7	40.8
1959	73.9	137.2	58.3	89.9	82.2	53.8	126.6	42.5
1960	76.2	133.8	59.7	89.3	85.3	57.0	127.6	44.6
1961	79.3	131.6	62.0	89.8	88.3	60.2	127.8	47.1
1962	82.2	129.9	63.9	90.2	91.1	63.3	128.6	49.2
1963	82.8	126.6	65.8	90.0	92.0	65.4	125.8	52.0
1964	79.6	129.6	67.5	92.2	86.4	61.4	118.0	52.1
1965	78.9	121.8	69.8	90.4	87.2	64.8	113.0	57.3
1966	80.1	122.6	73.4	92.9	86.3	65.4	109.1	59.9
1967	82.9	123.6	76.1	94.9	87.4	67.0	108.9	61.6
1968	84.0	118.8	79.2	94.7	88.7	70.7	106.1	66.7
1969	85.6	115.0	81.5	94.6	90.5	74.4	104.9	70.9
1970	90.8	116.2	80.7	94.5	96.1	78.2	112.5	69.5
1971	92.9	108.5	82.1	92.4	100.6	85.6	113.2	75.7
1972	95.4	105.1	85.2	92.9	102.7	90.8	112.0	81.0
1973	99.6	111.5	88.4	97.4	102.3	89.3	112.7	79.3
1974	100.7	109.7	92.8	99.4	101.3	91.8	108.5	84.6
1975	104.3	107.5	93.8	99.1	105.2	97.0	111.2	87.2
1976	104.0	107.0	96.6	100.7	103.3	97.2	107.7	90.2
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	103.9	100.4	103.7	102.5	101.4	103.5	100.2	103.3
1979	103.1	99.3	103.8	102.1	101.0	103.9	99.4	104.5
1980	99.7	98.1	107.9	104.2	95.7	101.6	92.4	109.9
1981	103.3	101.8	115.5	110.3	93.7	101.5	89.4	113.5
1982	93.3	97.2	116.9	109.3	85.4	96.0	79.9	120.2
1983	93.5	94.7	123.0	112.1	83.4	98.8	76.0	129.9
1984	87.2	93.8	127.7	114.6	76.1	93.0	68.3	136.0
1985	70.2	90.1	130.7	115.0	61.0	77.9	53.7	145.0

TABLE VI. MANUFACTURING INDUSTRIES

3. Textiles

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	36.2	140.6	73.4	122.9	29.5	25.8	49.4	52.2
1949	33.1	121.0	74.9	109.5	30.2	27.4	44.3	61.9
1950	34.9	134.0	76.3	119.1	29.3	26.0	45.7	57.0
1951	36.6	129.3	78.4	116.5	31.4	28.3	46.7	60.6
1952	35.9	122.6	79.0	111.9	32.1	29.3	45.5	64.4
1953	35.2	121.9	78.3	111.2	31.7	28.9	45.0	64.2
1954	33.4	107.8	77.3	100.9	33.1	30.9	43.2	71.7
1955	37.1	113.5	77.1	104.9	35.3	32.7	48.1	68.0
1956	37.8	110.5	77.3	102.8	36.8	34.2	48.9	69.9
1957	36.9	103.0	75.9	97.1	38.0	35.8	48.6	73.7
1958	36.4	95.9	74.1	91.4	39.8	38.0	49.2	77.3
1959	39.7	102.8	73.0	96.0	41.4	38.7	54.4	71.0
1960	38.3	98.6	72.5	92.6	41.4	38.9	52.9	73.5
1961	39.0	96.1	71.7	90.5	43.1	40.6	54.4	74.7
1962	41.5	98.6	70.9	92.3	45.0	42.1	58.6	71.8
1963	52.7	96.5	70.2	90.5	58.2	54.6	75.0	72.8
1964	56.0	98.1	70.5	91.8	61.0	57.1	79.5	71.8
1965	61.4	103.8	71.8	96.5	63.6	59.2	85.6	69.1
1966	66.7	108.2	75.5	100.7	66.3	61.7	88.4	69.8
1967	64.8	105.5	77.6	99.1	65.4	61.4	83.5	73.5
1968	68.0	110.4	79.5	103.3	65.8	61.6	85.5	72.1
1969	69.6	110.0	81.8	103.6	67.2	63.3	85.1	74.3
1970	73.5	104.6	83.4	99.8	73.7	70.3	88.2	79.7
1971	76.2	104.7	85.6	100.4	75.9	72.7	89.0	81.7
1972	81.5	110.4	89.4	105.6	77.2	73.8	91.2	80.9
1973	80.1	111.7	92.5	107.3	74.6	71.7	86.6	82.8
1974	71.7	102.8	95.6	101.2	70.9	69.8	75.1	92.9
1975	67.4	92.4	96.5	93.3	72.2	72.9	69.8	104.4
1976	82.3	99.8	97.9	99.4	82.8	82.5	84.0	98.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	98.2	99.1	101.3	99.6	98.6	99.0	96.9	102.1
1979	101.8	96.9	101.8	97.9	104.0	105.1	100.1	105.1
1980	101.8	92.5	102.2	94.7	107.6	110.1	99.6	110.5
1981	100.0	88.4	102.5	91.6	109.2	113.1	97.5	115.9
1982	93.9	76.7	100.9	82.1	114.4	122.6	93.1	131.6
1983	105.4	81.3	100.5	85.6	123.1	129.7	104.9	123.7
1984	104.7	81.0	100.6	85.5	122.5	129.3	104.0	124.2
1985	98.0	75.7	99.5	81.1	120.9	129.6	98.6	131.4

TABLE VI. MANUFACTURING INDUSTRIES

4. Apparel

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	45.3	91.4	39.9	85.4	53.0	49.6	113.5	43.7
1949	45.1	89.3	39.6	83.5	53.9	50.5	113.7	44.4
1950	48.9	92.5	40.4	86.5	56.6	52.9	121.1	43.7
1951	51.8	91.7	43.8	86.3	60.0	56.4	118.2	47.7
1952	52.9	94.2	43.6	88.4	59.9	56.2	121.3	46.3
1953	53.5	96.2	43.6	90.2	59.4	55.6	122.7	45.4
1954	50.3	89.3	43.3	84.1	59.8	56.3	116.0	48.5
1955	54.0	94.3	44.7	88.6	60.9	57.2	120.8	47.4
1956	55.2	93.8	46.2	88.4	62.4	58.8	119.6	49.2
1957	54.5	92.1	46.2	87.0	62.6	59.1	117.9	50.1
1958	53.4	87.8	46.2	83.2	64.2	60.8	115.7	52.5
1959	56.9	94.5	47.5	89.2	63.7	60.2	119.7	50.2
1960	58.9	93.3	48.4	88.2	66.8	63.1	121.7	51.9
1961	57.8	91.5	49.4	86.7	66.7	63.2	117.0	54.0
1962	61.3	97.1	51.7	92.0	66.6	63.1	118.6	53.2
1963	63.9	98.1	55.0	93.1	68.6	65.1	116.1	56.1
1964	66.0	98.8	57.2	93.9	70.3	66.8	115.5	57.9
1965	72.5	104.8	60.3	99.6	72.8	69.2	120.2	57.5
1966	78.4	108.1	63.7	102.9	76.2	72.5	123.1	58.9
1967	76.7	106.3	67.0	101.6	75.5	72.2	114.4	63.1
1968	80.5	106.6	71.1	102.2	78.7	75.5	113.1	66.7
1969	80.5	106.6	74.8	102.6	78.4	75.5	107.6	70.1
1970	75.1	101.6	76.9	98.4	76.3	73.9	97.6	75.7
1971	76.0	101.3	79.9	98.6	77.1	75.0	95.1	78.9
1972	88.9	105.9	84.5	103.2	86.2	84.0	105.2	79.8
1973	96.0	109.4	88.2	106.7	90.0	87.7	108.8	80.6
1974	90.6	101.6	92.2	100.4	90.3	89.2	98.3	90.7
1975	89.8	92.9	93.3	93.0	96.6	96.6	96.2	100.4
1976	96.6	100.2	96.2	99.7	96.9	96.4	100.4	96.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	105.1	101.0	102.4	101.2	103.8	104.0	102.6	101.4
1979	105.2	98.2	103.0	98.8	106.4	107.1	102.2	104.8
1980	107.6	95.5	104.5	96.7	111.3	112.6	102.9	109.4
1981	108.6	94.5	106.3	96.0	113.1	115.0	102.2	112.5
1982	101.5	85.9	104.0	88.2	115.1	118.2	97.6	121.0
1983	106.2	89.8	104.8	91.7	115.8	118.3	101.3	116.7
1984	112.0	92.7	104.6	94.2	118.9	120.8	107.0	112.9
1985	105.9	89.4	102.8	91.1	116.2	118.5	103.0	115.0

TABLE VI. MANUFACTURING INDUSTRIES

5. Lumber

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	46.3	120.0	32.7	100.3	46.2	38.6	141.7	27.3
1949	40.8	107.9	33.4	91.1	44.8	37.8	122.0	31.0
1950	43.6	116.1	35.9	98.0	44.5	37.6	121.3	31.0
1951	44.2	119.7	39.5	101.6	43.5	36.9	111.8	33.0
1952	43.7	114.5	41.1	98.0	44.6	38.2	106.4	35.9
1953	41.8	111.4	42.6	95.9	43.6	37.6	98.2	38.3
1954	40.5	103.1	43.5	89.7	45.1	39.3	93.1	42.2
1955	46.9	107.5	46.2	93.8	50.0	43.6	101.5	43.0
1956	46.9	104.5	48.6	92.0	51.0	44.9	96.5	46.5
1957	44.5	94.4	48.9	84.3	52.8	47.1	90.9	51.8
1958	41.3	90.2	49.3	81.1	50.9	45.7	83.6	54.7
1959	48.9	98.2	50.7	87.6	55.8	49.8	96.5	51.6
1960	45.8	92.7	52.5	83.6	54.7	49.3	87.2	56.6
1961	43.9	88.2	52.4	80.0	54.9	49.8	83.7	59.5
1962	44.1	89.2	53.5	81.0	54.5	49.5	82.5	60.0
1963	55.1	87.7	54.6	80.0	68.8	62.8	100.8	62.3
1964	66.7	90.9	56.1	82.8	80.5	73.4	118.8	61.8
1965	74.4	93.8	58.9	85.7	86.9	79.4	126.4	62.8
1966	73.0	95.0	62.3	87.3	83.7	76.9	117.2	65.6
1967	74.8	92.5	63.7	85.5	87.5	80.9	117.5	68.9
1968	77.7	92.0	65.7	85.5	90.8	84.4	118.3	71.4
1969	76.4	95.4	69.0	88.9	86.0	80.1	110.8	72.3
1970	77.8	89.9	71.4	85.4	91.2	86.5	109.0	79.4
1971	80.1	92.9	74.5	88.4	90.7	86.3	107.5	80.2
1972	91.0	101.4	78.9	95.8	94.9	89.7	115.4	77.8
1973	94.1	105.3	83.3	99.9	94.3	89.4	113.0	79.1
1974	92.9	97.2	90.0	95.4	97.5	95.7	103.3	92.6
1975	86.9	82.3	92.2	84.7	102.5	105.6	94.3	112.0
1976	96.4	94.2	95.5	94.5	102.0	102.3	100.9	101.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	102.1	104.5	105.0	104.7	97.6	97.7	97.3	100.5
1979	111.0	106.6	109.4	107.4	103.4	104.0	101.4	102.6
1980	108.0	95.5	112.1	99.7	108.4	113.1	96.3	117.4
1981	99.8	91.1	113.3	96.6	103.3	109.6	88.1	124.4
1982	84.8	80.6	111.1	88.1	96.2	105.2	76.3	137.9
1983	95.8	91.0	108.8	95.4	100.3	105.2	88.0	119.6
1984	111.5	96.1	108.4	99.2	112.4	116.0	102.8	112.9
1985	109.1	94.7	107.6	97.9	111.5	115.3	101.4	113.7

TABLE VI. MANUFACTURING INDUSTRIES

6. Furniture

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	41.8	77.4	41.2	72.0	58.1	54.0	101.6	53.1
1949	39.6	69.7	40.3	65.2	60.8	56.9	98.3	57.9
1950	48.1	82.0	41.2	75.9	63.4	58.7	116.8	50.2
1951	45.9	79.3	44.7	74.0	62.0	57.8	102.6	56.4
1952	50.8	79.7	45.5	74.5	68.2	63.7	111.5	57.1
1953	49.3	81.7	46.2	76.3	64.7	60.4	106.9	56.5
1954	47.3	74.5	45.0	70.0	67.6	63.5	105.2	60.4
1955	54.9	81.1	46.5	75.8	72.4	67.7	118.1	57.3
1956	55.3	82.2	48.5	77.0	71.8	67.3	114.1	59.0
1957	52.9	80.7	49.3	75.9	69.7	65.5	107.3	61.0
1958	48.1	77.0	48.4	72.6	66.3	62.5	99.4	62.9
1959	55.0	84.1	49.2	78.8	69.7	65.3	111.6	58.5
1960	54.1	82.7	49.9	77.6	69.7	65.4	108.5	60.3
1961	52.2	79.5	49.8	74.8	69.7	65.6	104.8	62.6
1962	56.3	83.8	50.9	78.7	71.5	67.1	110.5	60.8
1963	58.8	84.0	52.2	79.0	74.4	70.0	112.7	62.1
1964	63.9	87.9	53.5	82.6	77.3	72.6	119.3	60.9
1965	72.0	93.6	56.7	87.9	81.9	76.9	127.1	60.5
1966	76.2	99.2	61.8	93.4	81.6	76.8	123.4	62.3
1967	72.1	97.2	65.3	92.0	78.4	74.2	110.5	67.2
1968	77.6	99.9	68.1	94.8	81.9	77.7	114.1	68.1
1969	83.1	101.3	71.4	96.3	86.3	82.1	116.4	70.5
1970	71.5	93.9	75.8	90.9	78.6	76.1	94.4	80.7
1971	75.3	96.3	77.7	93.2	80.7	78.1	96.9	80.7
1972	91.4	105.2	82.6	101.4	90.1	86.9	110.7	78.5
1973	98.7	109.8	88.2	106.2	92.9	89.9	111.9	80.3
1974	90.4	104.4	93.9	102.6	88.1	86.6	96.3	90.0
1975	79.2	86.7	93.5	87.9	90.2	91.3	84.7	107.8
1976	91.9	93.0	96.1	93.5	98.3	98.9	95.6	103.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	112.5	105.9	104.8	105.7	106.4	106.2	107.3	99.0
1979	110.2	103.9	107.6	104.5	105.5	106.1	102.4	103.6
1980	104.3	96.5	110.2	98.8	105.6	108.0	94.6	114.2
1981	102.7	97.6	112.9	100.1	102.5	105.2	90.9	115.6
1982	97.2	89.1	111.7	92.8	104.8	109.2	87.0	125.4
1983	105.9	98.1	112.9	100.5	105.4	108.0	93.8	115.1
1984	123.7	106.7	115.4	108.1	114.4	116.0	107.2	108.2
1985	118.7	107.9	116.5	109.3	108.5	109.9	101.9	107.9

TABLE VI. MANUFACTURING INDUSTRIES

7. Paper

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	29.7	67.6	31.6	56.1	52.9	43.9	93.9	46.7
1949	29.7	63.6	32.7	53.9	55.1	46.6	90.6	51.4
1950	38.8	70.1	33.9	58.6	66.1	55.3	114.2	48.4
1951	41.4	73.5	36.0	61.6	67.2	56.3	115.1	48.9
1952	38.2	72.0	37.1	61.0	62.6	53.1	102.9	51.5
1953	40.4	76.3	38.6	64.3	62.8	52.9	104.7	50.5
1954	41.5	75.1	40.1	64.1	64.7	55.2	103.5	53.3
1955	45.7	79.1	42.1	67.5	67.8	57.8	108.7	53.2
1956	47.0	81.1	45.3	70.0	67.2	58.0	103.9	55.8
1957	43.5	80.7	47.8	70.6	61.5	53.9	90.9	59.3
1958	43.7	79.1	49.1	70.1	62.4	55.3	89.0	62.1
1959	49.5	83.7	50.5	73.6	67.2	59.1	98.0	60.4
1960	48.5	84.5	52.0	74.7	65.0	57.4	93.4	61.5
1961	51.1	85.2	53.5	75.6	67.6	60.0	95.5	62.8
1962	53.5	87.2	55.5	77.6	68.9	61.3	96.4	63.6
1963	54.5	87.9	57.1	78.6	69.3	62.0	95.4	64.9
1964	58.8	89.2	59.3	80.2	73.2	65.9	99.1	66.5
1965	61.8	91.8	62.9	83.2	74.2	67.3	98.2	68.5
1966	65.9	96.3	67.7	87.8	75.0	68.4	97.3	70.3
1967	63.2	96.9	71.3	89.5	70.7	65.2	88.7	73.5
1968	70.6	98.9	73.9	91.7	77.0	71.4	95.5	74.7
1969	76.9	101.9	76.8	94.7	81.3	75.5	100.2	75.4
1970	71.9	98.7	80.0	93.3	77.0	72.8	89.9	81.0
1971	75.5	96.1	81.5	91.9	82.2	78.6	92.6	84.8
1972	83.8	99.0	82.4	94.2	89.0	84.7	101.8	83.2
1973	96.2	101.4	84.7	96.6	99.5	94.8	113.5	83.5
1974	91.2	99.6	89.7	96.8	94.3	91.5	101.7	90.0
1975	77.4	89.6	92.5	90.4	85.6	86.4	83.7	103.2
1976	92.0	96.3	96.3	96.3	95.5	95.5	95.5	100.0
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	105.6	100.8	104.1	101.8	103.7	104.7	101.4	103.3
1979	103.7	101.0	108.7	103.3	100.4	102.7	95.4	107.6
1980	94.4	98.3	113.6	102.7	91.9	96.0	83.1	115.5
1981	94.1	97.9	116.2	103.2	91.2	96.1	81.0	118.6
1982	102.4	93.4	119.2	100.9	101.5	109.6	85.9	127.6
1983	110.2	94.4	121.3	102.2	107.8	116.7	90.9	128.4
1984	115.0	98.4	124.4	105.9	108.5	116.8	92.4	126.4
1985	119.6	98.4	127.8	106.9	111.8	121.5	93.6	129.9

TABLE VI. MANUFACTURING INDUSTRIES

8. Printing & Publishing

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	41.7	70.0	34.1	63.4	65.7	59.5	122.1	48.8
1949	43.6	69.0	35.7	62.8	69.5	63.3	122.3	51.7
1950	44.0	69.3	37.7	63.4	69.4	63.5	116.8	54.4
1951	45.0	70.7	40.3	65.0	69.3	63.7	111.7	57.0
1952	46.0	71.7	41.2	66.0	69.7	64.2	111.6	57.5
1953	48.0	73.9	41.9	67.9	70.7	65.0	114.5	56.7
1954	50.4	73.8	42.7	68.0	74.2	68.3	118.0	57.9
1955	53.6	76.1	44.3	70.2	76.5	70.5	121.2	58.2
1956	55.8	78.4	46.3	72.4	77.0	71.1	120.3	59.1
1957	56.6	78.6	47.5	72.7	77.8	72.0	119.0	60.5
1958	55.2	77.5	49.2	72.1	76.5	71.2	112.2	63.4
1959	59.2	79.6	50.7	74.1	79.9	74.4	116.8	63.7
1960	60.8	81.6	52.5	76.1	79.9	74.5	115.7	64.4
1961	61.6	81.5	54.6	76.3	80.6	75.5	112.7	67.0
1962	64.0	82.3	56.6	77.3	82.8	77.8	113.2	68.7
1963	69.4	82.8	58.3	78.0	89.0	83.8	119.1	70.4
1964	76.0	84.4	59.9	79.6	95.4	90.1	126.8	71.0
1965	78.1	87.7	62.7	82.8	94.3	89.1	124.6	71.5
1966	82.2	90.2	66.6	85.5	96.1	91.2	123.4	73.9
1967	83.6	91.9	70.5	87.6	95.4	90.9	118.7	76.6
1968	85.7	93.0	74.2	89.1	96.1	92.1	115.6	79.7
1969	90.3	95.6	77.4	91.9	98.3	94.4	116.6	81.0
1970	85.4	94.8	80.3	91.8	93.0	90.0	106.3	84.7
1971	86.0	92.6	83.5	90.7	94.8	92.9	103.0	90.2
1972	90.4	94.6	87.2	93.1	97.0	95.5	103.6	92.2
1973	96.2	96.8	90.5	95.5	100.7	99.4	106.3	93.5
1974	93.0	96.1	93.5	95.6	97.3	96.7	99.5	97.2
1975	92.8	93.5	94.9	93.8	98.9	99.2	97.8	101.5
1976	95.5	95.3	96.9	95.6	99.9	100.2	98.6	101.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	105.4	104.3	103.7	104.2	101.2	101.0	101.6	99.4
1979	107.4	108.4	107.0	108.1	99.4	99.1	100.4	98.7
1980	105.5	110.1	110.8	110.2	95.7	95.9	95.3	100.6
1981	109.6	111.2	114.4	111.9	98.0	98.6	95.8	102.9
1982	109.7	111.7	116.7	112.7	97.3	98.2	94.0	104.5
1983	114.0	116.1	120.4	117.0	97.4	98.1	94.7	103.6
1984	117.0	121.8	125.3	122.5	95.5	96.1	93.4	102.9
1985	118.9	124.9	130.1	126.0	94.4	95.2	91.3	104.2

TABLE VI. MANUFACTURING INDUSTRIES

9. Chemicals

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	16.8	61.0	27.7	46.5	36.1	27.6	60.8	45.4
1949	16.5	57.1	28.4	44.7	36.9	28.9	58.0	49.8
1950	19.9	59.5	29.6	46.5	42.7	33.4	67.1	49.7
1951	21.2	65.7	32.0	51.1	41.5	32.3	66.3	48.7
1952	21.4	67.1	34.0	52.8	40.5	31.9	62.9	50.6
1953	22.9	70.8	35.6	55.6	41.2	32.4	64.5	50.2
1954	24.1	69.1	36.8	55.2	43.7	34.9	65.5	53.2
1955	27.8	71.3	37.9	56.9	48.9	39.0	73.4	53.1
1956	29.1	73.4	39.6	58.9	49.4	39.6	73.4	54.0
1957	30.3	74.4	41.1	60.1	50.4	40.8	73.8	55.2
1958	29.8	72.6	42.2	59.6	50.0	41.1	70.7	58.1
1959	34.9	74.9	43.1	61.3	56.9	46.6	81.1	57.5
1960	34.8	76.7	44.3	62.9	55.3	45.3	78.5	57.7
1961	36.4	76.8	46.1	63.8	57.1	47.4	79.0	60.1
1962	39.0	78.9	47.6	65.7	59.4	49.4	81.9	60.4
1963	43.8	80.1	49.2	67.0	65.3	54.6	88.9	61.4
1964	47.3	81.4	51.4	68.8	68.8	58.2	92.1	63.1
1965	51.7	84.7	55.2	72.4	71.4	61.1	93.7	65.2
1966	55.0	89.2	59.7	77.0	71.4	61.6	92.1	66.9
1967	56.6	92.3	63.3	80.4	70.4	61.4	89.5	68.5
1968	64.3	95.5	66.9	83.9	76.7	67.3	96.1	70.1
1969	66.9	98.2	70.6	87.1	76.8	68.2	94.7	72.0
1970	68.0	96.8	74.2	87.7	77.5	70.3	91.7	76.6
1971	72.1	93.6	76.8	86.9	83.0	77.0	93.8	82.1
1972	78.7	93.9	78.6	87.8	89.7	83.9	100.1	83.7
1973	88.2	96.6	80.6	90.2	97.8	91.3	109.4	83.5
1974	79.7	97.7	86.2	93.0	85.7	81.6	92.5	88.2
1975	77.7	92.5	90.0	91.5	84.9	84.0	86.3	97.3
1976	90.6	96.5	94.9	95.9	94.5	93.9	95.5	98.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	103.7	102.3	104.6	103.2	100.5	101.3	99.2	102.2
1979	109.5	103.6	107.3	105.1	104.2	105.7	102.1	103.6
1980	99.1	102.9	110.6	106.0	93.5	96.3	89.6	107.5
1981	105.8	102.7	113.7	107.1	98.8	103.0	93.0	110.7
1982	109.3	98.5	115.2	105.1	104.0	111.0	94.9	117.0
1983	118.0	96.5	115.8	104.2	113.3	122.3	101.9	120.0
1984	125.5	97.5	117.6	105.6	118.9	128.7	106.7	120.6
1985	123.8	96.9	117.8	105.3	117.6	127.8	105.2	121.5

TABLE VI. MANUFACTURING INDUSTRIES

10. Petroleum

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

	Output and Inputs				Productivity Ratios			
Year	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	34.5	107.3	39.3	57.3	60.3	32.2	87.9	36.6
1949	37.0	103.6	40.4	57.3	64.7	35.7	91.6	39.0
1950	40.0	103.1	41.7	58.1	68.8	38.8	95.9	40.4
1951	41.7	109.3	44.3	61.7	67.6	38.1	94.1	40.5
1952	42.0	110.1	46.6	63.7	66.0	38.2	90.2	42.3
1953	43.9	114.0	49.5	66.9	65.5	38.5	88.5	43.5
1954	43.8	112.5	52.1	68.6	63.8	38.9	83.9	46.4
1955	48.5	112.4	54.6	70.5	68.8	43.1	88.8	48.6
1956	49.9	112.0	57.4	72.6	68.7	44.6	86.9	51.3
1957	48.5	110.1	59.8	74.0	65.5	44.0	81.0	54.4
1958	49.5	106.5	61.0	74.0	66.8	46.5	81.1	57.3
1959	55.8	102.9	62.1	74.0	75.4	54.2	89.9	60.3
1960	57.4	101.3	62.7	73.9	77.7	56.7	91.6	61.9
1961	59.5	96.6	64.0	73.5	81.0	61.6	92.9	66.3
1962	64.1	94.3	65.3	73.6	87.1	68.0	98.2	69.2
1963	66.2	90.3	65.5	72.6	91.2	73.3	101.0	72.6
1964	67.8	88.1	65.8	72.1	94.1	77.1	103.1	74.8
1965	71.4	88.7	67.2	73.3	97.4	80.5	106.2	75.8
1966	72.8	90.1	69.0	74.9	97.2	80.8	105.5	76.5
1967	72.6	90.1	71.9	77.0	94.4	80.6	101.0	79.8
1968	74.7	91.0	75.0	79.3	94.2	82.1	99.6	82.4
1969	71.5	89.0	77.2	80.3	89.1	80.4	92.6	86.8
1970	82.4	93.9	79.7	83.3	98.9	87.8	103.4	84.9
1971	87.1	96.1	82.4	86.0	101.4	90.6	105.7	85.7
1972	84.6	96.3	82.4	86.0	98.3	87.8	102.6	85.6
1973	89.0	94.6	82.6	85.7	103.8	94.0	107.8	87.3
1974	86.8	95.3	88.6	90.4	96.0	91.0	97.9	93.0
1975	86.9	92.4	92.5	92.5	93.9	94.1	93.9	100.2
1976	93.3	96.3	96.6	96.5	96.6	96.8	96.6	100.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.8	104.6	101.2	101.9	98.9	96.3	99.5	96.8
1979	99.8	106.1	104.7	104.9	95.2	94.1	95.3	98.7
1980	92.4	95.7	108.7	105.1	87.9	96.6	85.0	113.6
1981	88.2	106.6	113.7	111.7	79.0	82.8	77.6	106.7
1982	84.2	102.6	120.6	115.7	72.7	82.1	69.8	117.6
1983	82.8	99.0	122.6	116.3	71.2	83.7	67.6	123.8
1984	86.5	95.0	124.6	116.7	74.1	91.0	69.4	131.1
1985	86.5	87.6	125.8	115.7	74.7	98.7	68.7	143.5

TABLE VI. MANUFACTURING INDUSTRIES

11. Rubber

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	23.4	41.9	20.3	37.1	63.1	55.9	115.6	48.4
1949	21.4	37.4	20.7	33.7	63.7	57.3	103.7	55.3
1950	24.2	43.6	21.6	38.7	62.5	55.4	112.3	49.4
1951	31.1	46.5	23.0	41.3	75.3	66.9	135.0	49.5
1952	31.4	47.2	24.3	42.1	74.7	66.6	129.4	51.5
1953	31.1	49.9	25.2	44.4	70.1	62.4	123.3	50.6
1954	28.0	44.8	26.4	40.7	68.8	62.5	106.0	58.9
1955	31.0	51.8	27.6	46.4	66.8	59.8	112.4	53.2
1956	30.6	50.9	29.3	46.1	66.4	60.1	104.5	57.5
1957	30.4	51.6	30.1	46.8	65.0	59.0	100.9	58.4
1958	29.5	46.2	30.8	42.7	68.9	63.8	95.5	66.8
1959	36.8	52.4	32.0	47.9	76.8	70.1	114.8	61.1
1960	36.9	51.7	34.0	47.8	77.3	71.4	108.7	65.7
1961	38.8	51.6	35.6	48.1	80.7	75.2	109.1	69.0
1962	44.6	57.0	38.1	52.9	84.3	78.1	116.8	66.9
1963	48.6	58.1	39.6	54.0	89.9	83.6	122.8	68.1
1964	52.7	61.5	42.0	57.2	92.1	85.7	125.4	68.4
1965	57.2	67.4	45.5	62.6	91.4	84.9	125.7	67.5
1966	62.2	72.8	50.2	67.9	91.6	85.4	123.8	69.0
1967	62.3	72.7	54.1	68.7	90.6	85.7	115.1	74.4
1968	70.6	79.3	59.3	75.1	94.1	89.0	119.1	74.8
1969	77.6	83.6	64.2	79.5	97.5	92.8	120.8	76.8
1970	69.1	79.6	68.4	77.2	89.5	86.9	101.0	86.0
1971	74.7	80.0	71.8	78.3	95.5	93.4	104.0	89.8
1972	85.3	88.6	77.0	86.1	99.1	96.3	110.8	86.9
1973	98.6	97.2	83.6	94.3	104.6	101.5	118.0	86.0
1974	91.5	95.8	89.4	94.4	96.9	95.5	102.4	93.3
1975	82.7	82.9	91.8	84.8	97.5	99.7	90.1	110.7
1976	86.0	89.4	95.7	90.7	94.8	96.3	89.9	107.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.8	105.8	105.3	105.7	101.1	101.0	101.5	99.5
1979	108.5	108.7	109.0	108.8	99.7	99.8	99.5	100.3
1980	102.5	100.0	110.6	102.2	100.3	102.5	92.6	110.7
1981	113.2	102.3	113.7	104.7	108.1	110.7	99.6	111.2
1982	104.7	94.8	112.8	98.6	106.1	110.4	92.8	118.9
1983	115.2	100.4	111.5	102.7	112.1	114.8	103.3	111.1
1984	135.1	111.6	113.1	111.9	120.8	121.1	119.5	101.4
1985	141.7	111.3	116.0	112.3	126.2	127.4	122.2	104.2

TABLE VI. MANUFACTURING INDUSTRIES

12. Leather

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	98.9	160.4	76.9	148.6	66.6	61.7	128.7	47.9
1949	87.9	149.5	76.6	139.5	63.0	58.8	114.8	51.2
1950	87.6	155.3	75.0	144.0	60.8	56.4	116.7	48.3
1951	94.0	146.6	77.6	137.3	68.5	64.1	121.1	52.9
1952	83.0	154.3	78.0	143.7	57.8	53.8	106.5	50.5
1953	88.1	153.6	75.7	142.8	61.7	57.3	116.4	49.3
1954	81.2	144.2	75.4	134.9	60.2	56.3	107.7	52.3
1955	85.3	152.9	76.6	142.3	59.9	55.8	111.2	50.1
1956	85.9	150.5	78.0	140.6	61.1	57.0	110.1	51.8
1957	84.2	146.0	77.5	136.8	61.5	57.6	108.5	53.1
1958	79.6	138.2	77.5	130.3	61.1	57.6	102.7	56.1
1959	97.4	147.9	76.0	138.1	70.5	65.8	128.2	51.4
1960	87.7	140.5	76.8	131.7	66.6	62.4	114.2	54.7
1961	88.6	140.1	77.7	131.5	67.4	63.2	114.0	55.4
1962	96.0	141.7	78.3	132.9	72.3	67.8	122.6	55.3
1963	97.3	138.2	79.0	130.0	74.9	70.4	123.2	57.2
1964	100.2	136.7	79.5	128.8	77.8	73.3	126.1	58.1
1965	106.1	140.2	80.4	131.9	80.5	75.7	132.1	57.3
1966	111.8	146.1	83.8	137.5	81.3	76.5	133.3	57.4
1967	100.7	139.5	85.0	131.8	76.4	72.2	118.5	60.9
1968	105.2	141.5	90.9	134.3	78.3	74.4	115.8	64.2
1969	100.6	132.5	91.3	126.6	79.5	75.9	110.2	68.9
1970	91.4	124.1	90.8	119.3	76.7	73.7	100.7	73.2
1971	91.5	118.3	93.4	114.7	79.8	77.4	97.9	79.0
1972	94.4	118.7	94.3	115.2	81.9	79.5	100.1	79.4
1973	102.1	112.3	94.7	109.8	93.0	90.9	107.8	84.3
1974	98.3	104.2	98.2	103.3	95.1	94.3	100.1	94.3
1975	94.0	96.0	97.8	96.3	97.6	97.9	96.1	101.8
1976	105.0	102.7	98.9	102.2	102.8	102.3	106.2	96.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.0	102.0	100.3	101.6	102.3	102.0	103.7	98.3
1979	90.8	95.5	101.6	96.3	94.3	95.1	89.4	106.4
1980	91.6	89.2	103.9	91.2	100.5	102.7	88.2	116.5
1981	93.2	91.8	104.5	93.5	99.6	101.5	89.1	113.9
1982	86.3	83.0	102.4	85.7	100.6	103.9	84.2	123.3
1983	80.6	79.2	103.6	82.7	97.5	101.7	77.8	130.8
1984	75.7	74.1	104.0	78.3	96.6	102.1	72.8	140.3
1985	67.3	69.2	102.8	73.9	91.0	97.3	65.4	148.7

TABLE VI. MANUFACTURING INDUSTRIES

13. Stone, Clay, & Glass

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

	Output and Inputs				Productivity Ratios			
Year	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	45.2	82.1	40.4	70.2	64.3	55.0	111.9	49.1
1949	42.0	75.4	40.0	65.2	64.4	55.7	104.9	53.1
1950	50.8	82.1	40.9	70.3	72.3	61.9	124.2	49.8
1951	54.4	88.5	43.0	75.5	72.1	61.5	126.7	48.6
1952	52.3	84.4	43.9	72.7	71.9	62.0	119.2	52.0
1953	55.2	86.5	44.7	74.5	74.1	63.9	123.7	51.6
1954	53.9	82.1	44.8	71.3	75.6	65.7	120.5	54.5
1955	62.1	88.5	47.1	76.6	81.0	70.1	131.8	53.2
1956	61.0	90.4	51.3	79.1	77.2	67.5	119.0	56.7
1957	59.3	87.8	53.9	77.9	76.1	67.5	110.0	61.4
1958	57.8	82.6	54.7	74.3	77.8	70.0	105.7	66.2
1959	65.6	90.5	56.5	80.5	81.5	72.5	116.1	62.4
1960	64.0	89.5	58.3	80.4	79.6	71.5	109.9	65.1
1961	64.5	86.5	59.9	78.9	81.7	74.6	107.6	69.3
1962	67.7	88.0	61.5	80.5	84.1	77.0	110.1	69.9
1963	73.6	89.8	62.7	82.1	89.7	82.0	117.5	69.8
1964	78.5	92.9	64.7	84.9	92.4	84.5	121.2	69.7
1965	81.3	95.5	67.9	87.8	92.7	85.2	119.9	71.0
1966	81.9	98.0	72.2	90.9	90.1	83.5	113.4	73.6
1967	79.5	95.2	73.6	89.5	88.9	83.5	108.0	77.3
1968	82.6	96.8	75.7	91.3	90.5	85.3	109.1	78.1
1969	87.3	99.5	78.8	94.2	92.7	87.7	110.8	79.2
1970	83.7	96.4	81.3	92.5	90.5	86.8	102.9	84.4
1971	85.1	97.7	83.2	94.0	90.5	87.1	102.3	85.1
1972	93.4	103.3	86.1	98.9	94.5	90.4	108.5	83.4
1973	103.8	108.5	90.0	103.8	100.0	95.6	115.3	82.9
1974	97.5	106.2	94.3	103.2	94.5	91.7	103.3	88.8
1975	88.2	92.8	95.6	93.5	94.3	95.0	92.2	103.0
1976	98.4	96.0	98.0	96.5	101.9	102.5	100.3	102.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	109.6	105.1	104.4	104.9	104.5	104.4	105.0	99.3
1979	110.3	106.8	107.7	107.0	103.1	103.3	102.4	100.9
1980	99.6	98.4	111.2	101.7	98.0	101.2	89.6	113.0
1981	93.5	93.6	113.1	98.6	94.8	99.9	82.6	120.9
1982	85.9	83.9	112.7	91.4	94.0	102.3	76.2	134.3
1983	93.1	86.3	111.4	92.8	100.3	107.8	83.5	129.1
1984	104.1	91.8	111.4	96.9	107.4	113.3	93.4	121.3
1985	104.8	91.3	110.9	96.4	108.8	114.8	94.6	121.4

TABLE VI. MANUFACTURING INDUSTRIES

14. Primary Metals

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	80.8	102.1	37.1	83.7	96.5	79.1	217.7	36.3
1949	71.9	86.2	36.6	72.3	99.6	83.5	196.5	42.5
1950	85.4	99.9	37.2	82.2	103.9	85.5	229.4	37.3
1951	102.2	111.0	40.7	91.1	112.3	92.1	251.4	36.6
1952	91.2	102.2	43.5	85.7	106.4	89.3	209.7	42.6
1953	104.9	111.0	45.2	92.5	113.5	94.5	232.2	40.7
1954	81.7	93.1	45.1	79.8	102.4	87.8	181.3	48.4
1955	100.4	106.6	46.3	89.8	111.9	94.2	216.7	43.5
1956	99.2	108.7	49.4	92.1	107.7	91.3	201.0	45.4
1957	100.3	105.4	52.2	90.7	110.6	95.1	192.1	49.5
1958	76.0	87.3	53.0	78.2	97.2	87.1	143.4	60.7
1959	84.1	93.8	53.4	82.9	101.4	89.6	157.4	56.9
1960	82.5	94.7	55.8	84.3	97.8	87.1	147.9	58.9
1961	78.8	89.0	57.4	80.8	97.5	88.5	137.2	64.5
1962	83.9	91.8	58.2	83.0	101.1	91.4	144.1	63.4
1963	90.3	94.4	59.6	85.3	106.0	95.7	151.6	63.1
1964	102.0	101.5	61.8	91.0	112.2	100.5	165.1	60.9
1965	110.5	108.1	64.8	96.6	114.4	102.2	170.5	59.9
1966	117.9	111.9	69.7	100.8	117.0	105.4	169.2	62.3
1967	110.7	107.5	73.9	99.0	111.8	103.0	149.8	68.7
1968	110.1	108.5	77.0	100.7	109.3	101.5	142.9	71.0
1969	111.3	112.2	80.0	104.3	106.7	99.2	139.1	71.3
1970	101.5	105.2	83.2	99.8	101.7	96.5	122.0	79.1
1971	98.8	97.1	84.6	94.0	105.1	101.8	116.9	87.1
1972	105.6	100.0	86.3	96.6	109.3	105.6	122.4	86.3
1973	125.4	109.3	87.1	103.9	120.8	114.7	144.0	79.7
1974	127.5	110.5	91.0	105.7	120.6	115.3	140.0	82.4
1975	95.5	94.1	95.2	94.4	101.2	101.4	100.3	101.1
1976	99.8	96.7	98.3	97.1	102.9	103.3	101.6	101.7
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	109.5	104.4	102.1	103.8	105.4	104.9	107.2	97.8
1979	107.9	106.6	104.2	106.0	101.8	101.2	103.6	97.7
1980	100.6	93.9	105.3	96.7	104.0	107.1	95.5	112.2
1981	104.5	93.0	106.9	96.4	108.3	112.3	97.7	115.0
1982	76.5	73.5	105.3	81.3	94.1	104.2	72.7	143.3
1983	65.1	69.4	103.9	77.9	83.6	93.8	62.6	149.8
1984	74.1	73.4	104.2	81.0	91.5	100.9	71.1	141.9
1985	74.6	69.3	101.9	77.4	96.5	107.6	73.2	147.0

TABLE VI. MANUFACTURING INDUSTRIES

15. Fabricated Metals

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

	Output and Inputs				Productivity Ratios			
Year	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	39.3	66.1	26.4	58.8	66.9	59.5	149.0	39.9
1949	35.8	58.2	26.3	52.5	68.3	61.5	136.4	45.1
1950	42.8	67.1	28.1	59.9	71.4	63.8	152.5	41.8
1951	46.7	74.8	31.5	66.9	69.8	62.4	148.4	42.1
1952	49.7	75.4	33.2	67.7	73.4	65.9	149.6	44.1
1953	54.9	83.0	35.2	74.2	74.0	66.2	156.1	42.4
1954	50.4	74.2	35.8	67.3	74.9	68.0	141.0	48.2
1955	53.9	78.4	37.9	71.2	75.8	68.8	142.2	48.4
1956	54.9	78.9	40.7	72.2	76.2	69.6	135.1	51.5
1957	56.1	80.2	42.2	73.5	76.2	69.9	132.8	52.6
1958	50.9	72.7	42.4	67.5	75.4	70.1	120.1	58.3
1959	56.6	76.9	43.6	71.2	79.6	73.6	130.1	56.6
1960	56.7	77.1	44.6	71.5	79.3	73.6	127.1	57.9
1961	56.8	74.0	45.6	69.1	82.2	76.8	124.7	61.5
1962	62.0	78.2	47.0	72.8	85.2	79.3	131.9	60.2
1963	64.7	81.0	48.8	75.4	85.8	79.9	132.7	60.2
1964	68.8	83.5	52.1	78.1	88.2	82.5	132.0	62.5
1965	76.1	89.4	56.8	83.8	90.8	85.1	133.9	63.6
1966	83.3	97.4	61.5	91.2	91.3	85.5	135.4	63.2
1967	86.5	100.3	65.9	94.4	91.7	86.2	131.3	65.7
1968	91.2	104.6	70.6	98.7	92.3	87.2	129.0	67.6
1969	95.8	107.5	73.4	101.7	94.2	89.1	130.4	68.3
1970	87.7	98.6	75.1	94.6	92.7	88.9	116.7	76.2
1971	84.0	93.1	76.9	90.3	93.0	90.3	109.2	82.7
1972	92.9	98.5	79.6	95.2	97.6	94.3	116.8	80.8
1973	103.4	106.0	85.1	102.4	101.0	97.5	121.5	80.3
1974	94.3	103.6	91.2	101.4	93.0	91.0	103.4	88.0
1975	83.0	91.0	92.6	91.3	90.9	91.2	89.6	101.8
1976	93.5	95.5	96.3	95.6	97.8	97.9	97.1	100.9
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	104.3	105.5	104.7	105.3	99.1	98.9	99.7	99.2
1979	109.1	108.0	108.6	108.1	101.0	101.0	100.5	100.5
1980	104.2	100.4	111.3	102.2	102.0	103.9	93.7	110.9
1981	103.7	98.4	114.5	101.1	102.5	105.3	90.6	116.3
1982	91.9	86.7	113.0	91.2	100.8	106.1	81.3	130.4
1983	97.2	85.8	113.6	90.6	107.4	113.3	85.6	132.3
1984	107.0	93.8	116.7	97.7	109.5	114.0	91.6	124.4
1985	105.7	93.8	118.6	98.0	107.8	112.7	89.1	126.4

TABLE VI. MANUFACTURING INDUSTRIES

16. Machinery, except Electrical

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	37.7	63.9	27.1	55.6	67.8	59.0	139.0	42.5
1949	33.5	53.2	27.2	47.3	70.9	63.1	123.3	51.2
1950	35.5	57.0	28.6	50.6	70.2	62.3	124.0	50.3
1951	46.1	70.8	32.2	62.1	74.2	65.1	143.0	45.5
1952	50.7	72.7	34.3	64.0	79.1	69.7	147.8	47.2
1953	49.6	73.6	36.3	65.2	76.1	67.4	136.5	49.4
1954	44.4	64.9	36.8	58.5	75.8	68.4	120.5	56.8
1955	45.3	67.8	38.6	61.2	74.0	66.8	117.2	57.0
1956	50.2	74.1	41.2	66.6	75.3	67.8	121.8	55.7
1957	47.4	72.9	42.9	66.1	71.7	65.0	110.6	58.8
1958	40.0	61.1	43.1	57.0	70.2	65.5	92.8	70.6
1959	46.5	67.3	44.8	62.2	74.9	69.2	103.8	66.6
1960	46.5	67.9	45.6	62.8	74.0	68.4	101.9	67.2
1961	46.5	65.2	46.4	60.9	76.3	71.3	100.2	71.1
1962	52.0	69.2	48.6	64.5	80.5	75.1	106.9	70.2
1963	54.1	71.7	50.1	66.8	81.0	75.4	108.1	69.8
1964	60.7	76.3	53.0	71.0	85.4	79.5	114.5	69.4
1965	66.5	83.6	56.8	77.5	85.8	79.6	117.2	67.9
1966	74.0	93.5	61.9	86.3	85.7	79.1	119.6	66.2
1967	74.5	94.1	66.1	87.8	84.8	79.1	112.6	70.3
1968	74.6	92.5	68.7	87.1	85.6	80.7	108.6	74.3
1969	77.8	96.3	73.2	91.1	85.3	80.8	106.2	76.0
1970	77.8	91.7	76.2	88.3	88.2	84.8	102.1	83.1
1971	72.5	83.0	76.7	81.6	88.9	87.4	94.5	92.5
1972	82.4	88.9	78.9	86.6	95.1	92.7	104.5	88.7
1973	93.7	99.6	86.2	96.6	97.0	94.1	108.6	86.6
1974	95.9	103.9	93.3	101.5	94.5	92.4	102.8	89.8
1975	87.4	94.3	93.5	94.1	92.8	92.7	93.5	99.2
1976	93.2	94.9	96.3	95.2	97.9	98.2	96.8	101.5
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.0	108.4	107.1	108.1	99.9	99.6	100.8	98.8
1979	114.3	115.1	114.8	115.0	99.4	99.3	99.5	99.8
1980	115.3	114.1	121.4	115.7	99.7	101.1	95.0	106.4
1981	120.8	113.4	127.4	116.5	103.7	106.6	94.8	112.4
1982	109.1	99.9	129.8	106.6	102.4	109.2	84.1	129.9
1983	118.5	91.9	130.4	100.5	118.0	129.0	90.9	141.9
1984	149.1	102.5	137.8	110.4	135.1	145.4	108.2	134.4
1985	183.5	100.7	141.3	109.8	167.2	182.2	129.9	140.3

TABLE VI. MANUFACTURING INDUSTRIES

17. Electrical Machinery

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	15.7	51.3	19.9	45.1	34.7	30.5	78.8	38.7
1949	14.4	44.1	19.9	39.3	36.6	32.6	72.4	45.1
1950	17.5	52.4	20.9	46.2	37.9	33.4	83.7	39.9
1951	20.9	59.2	23.4	52.1	40.0	35.2	89.1	39.6
1952	25.5	63.7	24.9	56.0	45.5	40.0	102.5	39.1
1953	26.5	71.4	26.4	62.5	42.3	37.1	100.4	36.9
1954	23.8	62.1	26.8	55.1	43.1	38.2	88.7	43.1
1955	25.5	65.5	28.1	58.1	44.0	39.0	90.9	42.9
1956	27.8	70.0	30.0	62.0	44.8	39.7	92.7	42.8
1957	28.8	70.2	31.1	62.4	46.1	41.1	92.6	44.4
1958	27.1	64.8	31.1	58.1	46.7	41.9	87.2	48.0
1959	32.6	73.3	33.0	65.3	49.9	44.5	98.9	45.0
1960	34.2	75.7	34.5	67.5	50.6	45.1	99.1	45.5
1961	36.1	76.4	36.1	68.5	52.7	47.2	99.8	47.3
1962	40.6	81.4	39.1	73.0	55.6	49.9	103.9	48.0
1963	44.5	80.3	40.6	72.5	61.5	55.5	109.6	50.6
1964	47.0	80.3	42.9	73.0	64.5	58.6	109.6	53.4
1965	56.0	87.3	47.3	79.5	70.5	64.1	118.4	54.2
1966	64.7	100.8	54.6	91.7	70.5	64.2	118.4	54.2
1967	67.2	101.9	59.7	93.7	71.7	65.9	112.6	58.6
1968	70.3	103.3	63.8	95.7	73.5	68.0	110.2	61.8
1969	75.2	105.2	68.8	98.2	76.6	71.5	109.4	65.4
1970	69.4	99.1	72.1	93.9	73.9	70.1	96.3	72.8
1971	69.6	92.7	73.9	89.1	78.1	75.1	94.1	79.8
1972	77.4	97.0	77.1	93.2	83.0	79.7	100.3	79.5
1973	88.6	105.2	85.3	101.4	87.4	84.2	103.9	81.0
1974	82.6	103.8	90.6	101.3	81.5	79.5	91.1	87.3
1975	75.9	89.4	90.4	89.6	84.7	84.9	83.9	101.2
1976	83.8	93.7	94.9	93.9	89.2	89.4	88.2	101.4
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	114.1	106.7	106.9	106.7	107.0	107.0	106.8	100.2
1979	121.6	112.4	115.7	113.1	107.5	108.1	105.0	102.9
1980	126.5	110.0	124.2	112.7	112.2	115.0	101.8	112.9
1981	129.8	110.6	132.5	114.8	113.0	117.4	97.9	119.8
1982	124.8	105.0	137.8	111.3	112.1	118.8	90.5	131.2
1983	133.7	107.9	145.0	115.0	116.2	123.9	92.2	134.4
1984	147.3	119.7	158.7	127.2	115.8	123.1	92.8	132.6
1985	154.4	118.2	169.1	128.0	120.6	130.6	91.3	143.0

TABLE VI. MANUFACTURING INDUSTRIES

18. Transportation Equipment

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	25.5	63.0	30.3	54.3	46.9	40.4	84.1	48.0
1949	25.7	60.5	29.8	52.3	49.2	42.5	86.5	49.2
1950	33.2	65.7	31.2	56.5	58.7	50.5	106.2	47.5
1951	37.6	78.9	35.5	67.3	55.9	47.7	106.0	45.0
1952	45.1	91.6	38.0	77.3	58.4	49.3	118.9	41.4
1953	55.0	106.2	40.2	88.5	62.1	51.8	136.8	37.8
1954	51.0	92.6	41.2	78.9	64.6	55.0	123.8	44.4
1955	58.2	99.9	43.8	84.9	68.5	58.2	132.7	43.9
1956	51.0	97.8	47.9	84.5	60.4	52.2	106.5	49.0
1957	54.8	99.7	50.1	86.5	63.3	54.9	109.4	50.2
1958	46.5	83.3	50.2	74.6	62.3	55.8	92.7	60.2
1959	50.7	88.2	51.8	78.6	64.6	57.6	97.9	58.8
1960	51.0	86.1	51.7	77.0	66.2	59.2	98.6	60.1
1961	49.5	80.8	52.5	73.3	67.5	61.3	94.2	65.0
1962	57.7	89.0	54.5	79.9	72.1	64.9	105.9	61.3
1963	65.5	92.8	57.2	83.4	78.5	70.6	114.6	61.6
1964	68.6	92.4	60.3	84.0	81.7	74.2	113.7	65.3
1965	76.5	100.7	64.5	91.2	83.8	75.9	118.5	64.1
1966	83.9	109.8	71.8	99.8	84.1	76.4	116.8	65.4
1967	83.6	108.8	79.1	101.0	82.8	76.9	105.7	72.7
1968	92.2	115.2	83.7	106.9	86.2	80.0	110.2	72.6
1969	88.5	112.3	88.0	106.0	83.6	78.8	100.6	78.3
1970	71.9	94.7	87.0	92.7	77.5	75.9	82.6	91.9
1971	78.7	90.9	87.4	90.0	87.4	86.6	90.0	96.2
1972	83.6	94.3	90.2	93.2	89.7	88.6	92.7	95.7
1973	92.3	102.4	94.1	100.2	92.1	90.2	98.1	91.9
1974	85.0	95.8	96.2	95.9	88.6	88.7	88.4	100.4
1975	79.7	87.7	96.1	89.9	88.7	90.9	82.9	109.6
1976	91.0	94.2	97.8	95.2	95.6	96.6	93.0	103.8
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.6	106.1	105.3	105.9	100.6	100.5	101.2	99.3
1979	100.6	107.3	111.5	108.5	92.7	93.7	90.2	103.9
1980	84.8	96.9	115.6	101.8	83.3	87.6	73.4	119.3
1981	79.4	97.3	119.8	103.2	76.9	81.6	66.3	123.1
1982	72.9	89.2	122.4	98.0	74.4	81.6	59.5	137.1
1983	91.0	92.7	122.4	100.5	90.5	98.2	74.3	132.1
1984	107.3	102.7	128.3	109.4	98.1	104.5	83.6	125.0
1985	109.0	106.9	131.1	113.2	96.3	102.0	83.2	122.6

TABLE VI. MANUFACTURING INDUSTRIES

19. Instruments

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	17.4	48.5	24.2	42.3	41.2	35.9	72.1	49.9
1949	16.9	43.7	23.5	38.5	44.0	38.7	71.9	53.8
1950	20.0	47.4	25.2	41.6	48.0	42.2	79.3	53.2
1951	24.4	57.7	29.2	50.4	48.4	42.3	83.6	50.7
1952	28.1	63.4	30.9	55.2	50.9	44.3	90.9	48.7
1953	30.6	69.0	32.3	59.8	51.2	44.4	94.7	46.9
1954	30.1	62.0	32.0	54.2	55.5	48.6	94.2	51.6
1955	32.0	62.8	33.9	55.3	57.8	50.9	94.4	53.9
1956	33.8	65.8	36.7	58.1	58.3	51.5	92.3	55.7
1957	32.8	66.0	37.7	58.4	56.2	49.8	87.1	57.2
1958	32.5	61.5	37.3	54.9	59.2	52.8	87.0	60.7
1959	36.5	67.0	39.4	59.5	61.4	54.5	92.8	58.8
1960	37.8	68.3	41.5	61.1	61.9	55.3	91.2	60.7
1961	36.7	67.6	43.1	60.9	60.3	54.3	85.2	63.8
1962	41.1	69.5	45.3	62.8	65.4	59.1	90.7	65.1
1963	43.0	69.7	46.5	63.2	68.0	61.7	92.5	66.7
1964	44.1	70.2	48.5	64.1	68.8	62.9	90.9	69.2
1965	50.9	74.4	51.2	67.9	74.9	68.3	99.3	68.8
1966	58.4	83.6	56.3	76.0	76.8	69.8	103.7	67.3
1967	61.1	86.5	60.5	79.1	77.2	70.6	101.0	69.9
1968	66.3	87.0	64.4	80.5	82.4	76.2	103.0	74.0
1969	73.7	90.0	68.9	83.8	88.0	81.9	107.0	76.6
1970	64.6	85.8	73.5	82.2	78.7	75.3	88.0	85.6
1971	65.6	80.0	76.3	78.9	83.1	82.0	85.9	95.4
1972	73.5	84.3	79.5	82.9	88.7	87.2	92.5	94.2
1973	80.9	91.6	84.9	89.6	90.2	88.2	95.2	92.7
1974	85.4	96.5	92.1	95.2	89.8	88.6	92.8	95.4
1975	84.9	87.7	92.5	89.1	95.3	96.8	91.8	105.4
1976	89.4	93.0	96.7	94.1	95.1	96.2	92.5	104.1
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.6	106.7	104.7	106.2	101.3	100.9	102.8	98.1
1979	118.5	113.1	109.4	112.2	105.6	104.7	108.3	96.7
1980	114.8	115.1	114.1	114.9	99.9	99.8	100.7	99.1
1981	124.7	117.9	119.9	118.6	105.2	105.8	104.1	101.7
1982	119.2	114.8	122.7	117.3	101.7	103.9	97.2	106.9
1983	122.0	112.3	126.0	116.5	104.7	108.6	96.8	112.2
1984	124.5	118.0	132.6	122.4	101.7	105.5	93.9	112.4
1985	128.2	119.3	138.5	125.1	102.5	107.5	92.5	116.1

TABLE VI. MANUFACTURING INDUSTRIES

20. Miscellaneous Manufactures

Indexes of Real Output, Inputs, and Productivity Ratios
(1977=100)

Year	Output and Inputs				Productivity Ratios			
	Real Output	Labor Input	Capital Input	Total Factor Input	Total Factor Productivity	Output per Unit Labor	Output per Unit Capital	Capital-Labor Ratio
1948	39.6	100.6	36.3	87.2	45.4	39.4	109.2	36.0
1949	35.6	90.2	35.4	78.8	45.2	39.5	100.7	39.3
1950	40.8	95.3	37.5	83.3	48.9	42.8	108.7	39.3
1951	42.9	95.9	41.5	84.7	50.6	44.7	103.2	43.3
1952	44.0	93.5	46.0	83.8	52.4	47.0	95.5	49.2
1953	45.7	99.4	49.7	89.3	51.2	46.0	92.1	50.0
1954	44.0	90.9	49.1	82.5	53.3	48.4	89.6	54.0
1955	48.7	93.0	50.5	84.5	57.6	52.4	96.4	54.3
1956	49.0	93.8	52.3	85.5	57.3	52.3	93.8	55.7
1957	48.3	90.1	52.9	82.7	58.4	53.6	91.3	58.8
1958	47.4	86.4	52.6	79.8	59.4	54.9	90.1	60.9
1959	52.9	90.2	53.5	83.0	63.7	58.6	98.8	59.3
1960	52.2	89.7	54.7	82.8	63.0	58.2	95.3	61.0
1961	53.4	87.6	54.7	81.1	65.9	61.0	97.8	62.4
1962	56.3	89.8	56.3	83.2	67.6	62.7	100.1	62.7
1963	56.8	88.5	57.3	82.5	68.9	64.2	99.1	64.7
1964	59.0	90.3	59.1	84.3	70.0	65.3	99.8	65.4
1965	62.7	96.9	61.1	89.9	69.8	64.8	102.6	63.1
1966	67.4	102.4	64.9	95.0	70.9	65.9	103.8	63.4
1967	67.1	98.7	67.1	92.6	72.4	68.0	100.0	68.0
1968	72.3	98.8	68.8	93.1	77.7	73.1	105.1	69.6
1969	76.6	99.4	73.0	94.4	81.1	77.0	104.9	73.4
1970	74.1	96.2	76.1	92.4	80.2	77.1	97.5	79.1
1971	77.9	93.6	78.3	90.7	85.9	83.3	99.5	83.6
1972	86.7	99.5	81.0	96.0	90.3	87.2	107.0	81.5
1973	87.0	102.3	85.8	99.2	87.6	85.0	101.3	83.9
1974	80.8	101.6	90.8	99.5	81.1	79.5	88.9	89.4
1975	85.0	93.1	90.1	92.5	91.8	91.3	94.3	96.8
1976	93.3	96.6	96.2	96.6	96.6	96.5	96.9	99.6
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	97.4	104.7	104.7	104.7	93.0	93.0	93.1	100.0
1979	90.4	101.5	107.6	102.6	88.0	89.0	83.9	106.1
1980	75.6	94.4	111.5	97.7	77.5	80.1	67.8	118.1
1981	90.9	93.6	113.9	97.4	93.3	97.1	79.8	121.7
1982	83.1	88.3	113.1	93.0	89.3	94.1	73.4	128.1
1983	74.3	88.7	113.3	93.3	79.6	83.8	65.6	127.8
1984	88.4	88.8	114.9	93.7	94.3	99.5	76.9	129.4
1985	87.9	87.9	115.6	99.1	94.4	100.1	76.0	131.6

Appendix

SOURCES OF DATA

All of the multiple input productivity indexes and the basic data used to derive them have been revised back to 1948. The changes made incorporate both the recent benchmark revisions in the National Income and Product Accounts as well as the rebasing of constant dollar series to a 1982=100 base period. Since almost all of the basic data are measured in real dollar terms, these changes are pervasive. In addition, the relative shares of labor and capital used to weight the indexes have been revised for the appropriate years, 1948, 1959, 1969, and 1978. Overall, there are no major shifts in these weights as they are derived with current dollar data. The following section outlines in general terms the sources of the basic data series. For a more detailed description of the methodology used and a more complete discussion of the data, a technical paper is available upon specific request to the American Productivity Center.

A. Real Output

Output is the annual series of gross product originating in constant 1982 dollars as recently revised by the Department of Commerce, Bureau of Economic Analysis (BEA) in its National Income and Product Accounts. The farming sector excludes agricultural services, forestry, and fisheries. Output for nonfinancial corporate business is taken directly from the Bureau of Labor Statistics data, which are based on BEA estimates. Output for the manufacturing and non-farm non-manufacturing segments are the sum of their individual industry outputs. The sum of these two segments plus farming yields output for the private domestic business economy.

B. Labor Hours

In general, labor hours are based on BLS data. The figures represent total hours paid for, not hours actually worked. Employment for each industry includes employees on non-agricultural payrolls (production and non-production workers), self-employed (formerly termed proprietors), and unpaid family workers. The figures on all persons employed are then multiplied by their respective average hours worked per week and the sum total of these products is multiplied by 52 weeks to derive hours of all persons. In cases where average hours are only available for production workers, these hours are used for all employees in the industry. Estimates of the manufacturing hours are adjusted slightly (generally plus or minus 1 percent) so that the sum of the industries is equal to the BLS published total for manufacturing hours. Hours for services are the residual of non-farm non-manufacturing hours less the sum of hours for the other eight industries in the sector.

C. Capital Input

Capital input is the sum of gross fixed capital, inventories, and land.

1. Gross fixed capital is gross private non-residential fixed capital available from the Department of Commerce. In 1985, the BEA published fixed capital data for the individual industries in addition to the sector totals. This year, these data were made available in constant 1982 dollars and incorporated the major historical revisions in the National Income and Product Accounts. In addition to some definitional and service life changes, new information on the industry distribution of investment derived from the 1982 Economic Censuses, the BEA capital flow table for 1977, and revised plant and equipment expenditures are incorporated in the capital estimates. Gross capital for several industries has been further adjusted to correspond to American Productivity Center classifications.

2. Inventories are derived from BEA data for all sector totals except Nonfinancial Corporate Business, which is based on information from the Federal Reserve Flow of Funds Accounts. Half of the manufacturing inventories are available in detail and the remaining are estimated based on end-of-year inventory distributions from the 1982 Census of Manufacturing. Non-farm non-manufacturing inventories utilize the sector total with industry data estimated according to proportions represented in the 1982 IRS Statistics of Income. Trade inventories, however, are exclusive of the derivation and are available directly from the Department of Commerce.

3. Land ratios are applied to gross fixed capital estimates and represent the ratio of land to depreciable assets for each industry derived from data from the 1982 Statistics of Income.

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